DODONOV, A.

Improve standard accounting and calculation of production costs.
Bukhg.uchet 14 no.5:12-21 My '57. (MLRA 10:7)
(Costs, Industrial)

DODONOV, A.

Methods for determining the efficiency of the continuous-flow method of production. Fin.SSSR 18 no.2:27-34 F '57.
(MLRA 10:5)

(Assembly-line methods)

DODONOV, A.

Accounting for and computing obsolescence of fixed assets. Vop. ekon. no.1:120-127 Ja '58. (MIRA 11:3)
(Depreciation)

DODONOV, A.A.

[Problems of accounting in industries of the U.S.S.R.; the author's summary of a dissertation] Problemy bukhgalterskogo ucheta v promyshlennosti SSSR; avtoreferat dissertatsii. Moskva, Mosk. fin. in-t M-va vysshego obrazovaniia SSSR, 1958. 45 p. (MIRA 14:7)

(Accounting)

16(2) SOV/2-59-3-4/13

AUTHOR: Dodonov,A.

TITLE: **Methods of Calculating Amortization**
(O metodakh nachisleniya amortizatsii).

PERIODICAL: Vestnik statistiki, 1959, Nr 3, pp 34-40 (USSR)

ABSTRACT: The article is written on the occasion of the impending re-evaluation of the basic funds of the USSR. The author makes a comparison between the amortization practiced in the capitalist countries (regressive, double regression, cumulative sinking funds, etc.) and the Soviet method of continuous amortization spread over the whole life of constructions or equipment. He dwells on the details of the Soviet method and the planning of expenditures for capital repairs.

Card 1/1

DODONOV, Afanasiy Alekseyevich; NIKOL'SKIY, A., red.; KOROTKOVA, L., red.; LEBEDEV, A., tekhn.red.

[Depreciation and repair of basic industrial equipment in the U.S.S.R.] Amortizatsiia i remont osnovnykh sredstv v promyshlennosti SSSR. Moskva, Gosfinizdat, 1960. 206 p. (MIRA 13:9)
(Industrial equipment)

USSR

ACCESSION NR: AP4011282 S/0286/64/000/002/0077/0077

AUTHOR: Zelenov, B. A.; Dodonov, A. A.; Belousov, N. N.; Ivashkin, A. A.; Shenderov, B. A.

TITLE: A method for hot aluminizing of articles made of titanium and its alloys. Class 48, No. 160068

SOURCE: Byul. izobret i tovarn. znakov, no. 2, 1964, 77

TOPIC TAGS: aluminizing, hot aluminizing, titanium protection, aluminized titanium, aluminized titanium alloys, metal coating, plating, aluminum, titanium, sulfuric acid, hydrochloric acid, pickling

TRANSLATION: A method for hot aluminizing of articles made of titanium and its alloys with preliminary pickling, notable for the fact that with the aim of improving the coupling and obtaining a stable aluminum coating the articles are subjected to pickling by solutions of sulfuric (35-65%) or hydrochloric (30-37%) acid at a temperature of 50-70°C for a duration of 30-40 minutes, at room

Card 1/2

ACCESSION NR: AP4011282

temperature for 2-3 hours with the attainment of a hydride film on them, after which the articles are submerged in melted aluminum at a temperature of 800-850°C.

ASSOCIATION: None

SUBMITTED: 30Mar62 DATE ACQ: 14Feb64 ENCL: 00

SUB CODE: ML, EL NO REF SOV: 000 OTHER: 000

Card 2/2

DODONOV, Afanasiy Alekseyevich, prof.; PETRUSHEV, I.M., red.; GERASIMOVA, Ye.S., tekhn. red.

[Accounting problems in U.S.S.R. industry] Problemy bukhgalterskogo ucheta v promyshlennosti SSSR. Moskva, Ekonomika, 1964. 326 p. (MIRA 17:3)

TOKAREV, B.F., kand. tekhn. nauk, dotsent; DODONOV, A.V., inzh.

Choice of an optimum relationship between the armature windings of the "Magnovol't" amplidyne. Trudy MEI no.39: 69-80 '62. (MIRA 17:6)

1ST AND 2ND ORDERS PROCESSES AND PROPERTIES INDEX 3RD AND 4TH ORDERS

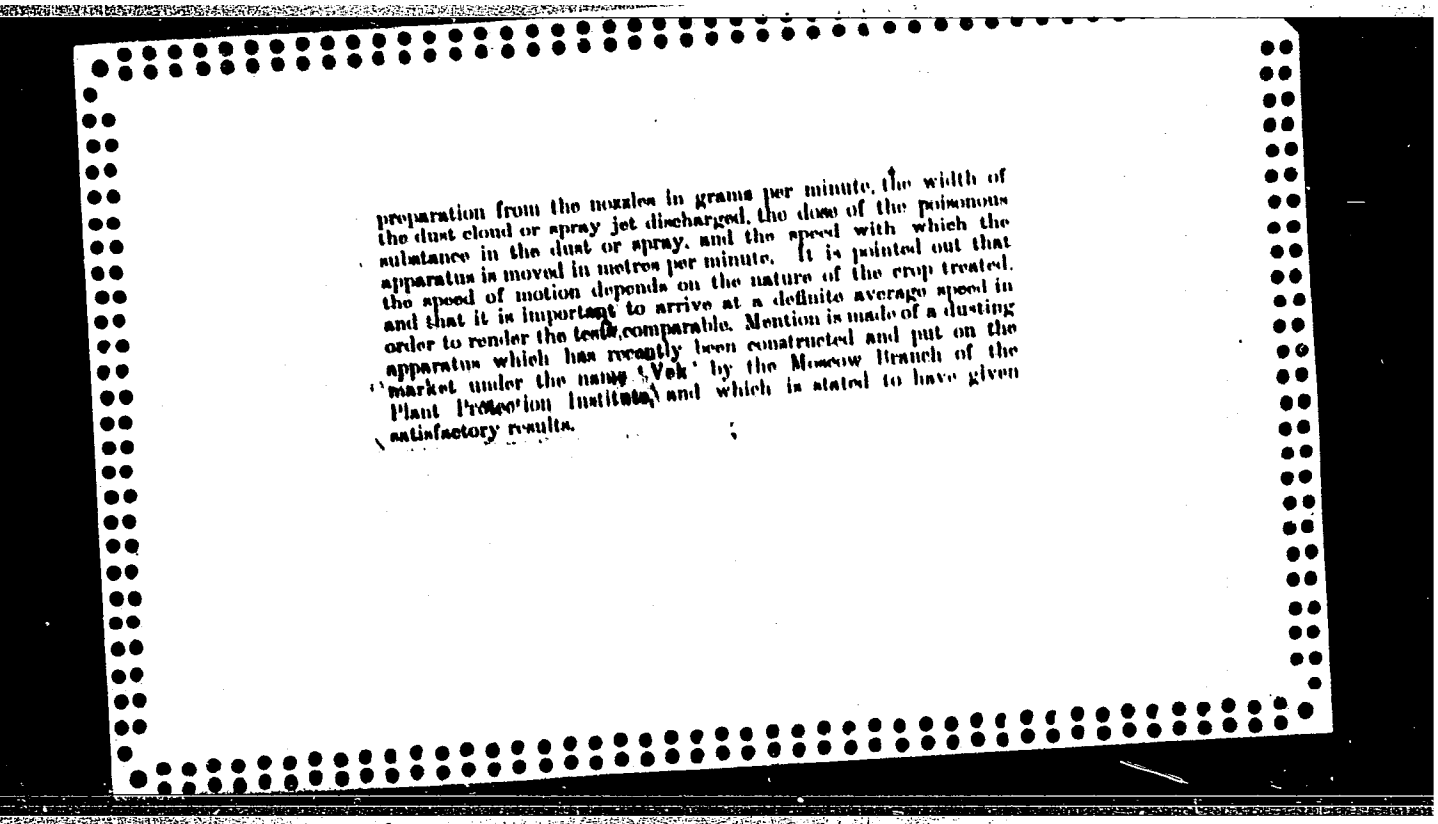
DORONOV, B.A.

AI)

Доронов (Б. А.). К методике полевого испытания инсектицидов и фунгицидов. [On the methods of testing insecticides and fungicides in the field.]—*Plant Protection*, Leningrad, viii, 2, pp. 135–148, 3 graphs, 1931. [English summary.]

The author states that in his opinion much of the scientific and practical value of the work hitherto done in testing the efficacy of insecticides and fungicides is vitiated by the lack of uniformity in the methods employed, which precludes the possibility of checking the results of one worker against those obtained by others. This paper represents an effort to arrive at a standardisation of the methods used in field tests, two types of which are considered, namely, those on a small scale, which are comparable with laboratory experiments, and those on a large scale, serving to check the results obtained in the first. Emphasis is first laid on the necessity of using more or less uniform dusting or spraying apparatus, since so much of the results depends on their working and on the rate of application of the preparations. Exact formulae are worked out for the estimation of the quantities of dusts and sprays applied, the factors of which include the discharge of the

METALLURGICAL LITERATURE CLASSIFICATION



preparation from the nozzles in grams per minute, the width of the dust cloud or spray jet discharged, the dose of the poisonous substance in the dust or spray, and the speed with which the apparatus is moved in metres per minute. It is pointed out that the speed of motion depends on the nature of the crop treated, and that it is important to arrive at a definite average speed in order to render the tests comparable. Mention is made of a dusting apparatus which has recently been constructed and put on the market under the name 'Vek' by the Moscow Branch of the Plant Protection Institute, and which is stated to have given satisfactory results.

DODONOV, B.I.

The process of categorial learning of grammatical material. Vop. psikhol. 5 no.2:157-168 Mr-Ap '59. (MIRA 12:6)

1. Vsesoyuznyye pionerskiye lagerya "Artek", Krym.
(Learning, Psychology of)
(Language and languages--Study and teaching)

DOD[illegible]OV, B. P. --"Investigation of the Stability of Cylindrical Joints." Min Higher Education USSR. Moscow Automobile and Road Inst imeni V. M. Molotov. Moscow, 1955. (Dissertation for the Degree of Candidate in Technical Science).

SO Knizhanay letopis'
No 2, 1956

21.2122

S/114/60/000/008/007/010
E194/E255

AUTHOR: Dodonov, B. P., Candidate of Technical Sciences

TITLE: Off-tuning of Straddle-attached Turbine Blades

PERIODICAL: Energomashinostroyeniye, 1960, No. 8, pp. 38-40

TEXT: In respect of vibration stresses, turbine blades with "hinged" roots (forked for straddle attachment to the wheel rim) have certain advantages over blades with rigidly fixed roots. Blades with "fir-tree" or "swallow-tail" roots subject to heavy loadings due to centrifugal force behave as fixed-root blades. High static stresses are set up near their root sections due to centrifugal forces giving rise to high vibrational stresses. With the "hinged"-root fixing the root section of the blade is relieved of vibration stresses. One feature is common to all forms of bending oscillation of rigidly fixed blades and also to the higher forms of bending oscillation of "hinged"-root blades. On the frequency graph, the line of natural frequency of blade oscillations intersects the lines of exciting harmonics. Hence the blades exhibit a number of resonances at well-defined speeds. The periodicity of a "hinged"-root blade when oscillating in the first

Card 1/4

S/114/60/000/008/007/010
E194/E255

Off-tuning of Straddle-attached Turbine Blades

hinged mode lies along the line of exciting harmonic over the whole speed range. This is a very important property, because if the blade is detuned so that on the frequency graph its pendulum frequency does not coincide with the exciting harmonic the blade will not be in resonance over the speed range. Vibration of a "hinged"-root blade is then considered as that of a mathematical pendulum. The blade is considered as hinged at its point of attachment to the rotor and as having a mass at the end of it. As the disc rotates, the frequency of vibration of the pendulum so formed depends on its tuning and is proportional to the speed. A formula is given for the frequency of vibration of a "hinged"-root blade in the first mode of vibration. The formulae assume that the pendulum moves without friction; if the damping is slight the amplitude is large but not infinite at resonance. In order to reduce vibration stresses of "hinged"-root blades oscillating in the first mode it is necessary to reduce their amplitude of oscillation to a minimum. This may be done by detuning the pendulum frequency of the blades so that on the frequency graph it lies between neighbouring lines of exciting harmonics. A formula

Off-tuning of Straddle-attached Turbine Blades

is then given for the pendulum frequency of a "hinged"-root blade, and three methods of determining the tuning are described, namely, from a frequency graph, by the accurate expression (8), and by the simplified formula (3). The three formulae are briefly discussed and it is shown that by designing for a suitable pendulum frequency the blades may be very accurately detuned from dangerous frequencies of exciting harmonics. An example is then given of calculations of vibration frequencies in gas-turbine blading which are compared with experimentally-measured results. The calculated and experimental frequencies and bending of the "hinged"-root blades are plotted in Fig. 5. The vibration stresses and experimental frequency of vibrations were determined by wire strain-gauges fixed to the back of the blades. It will be seen that the frequency of vibration lay close to the second exciting harmonic. In fact, certain of the blades were subject to high vibration stresses over the entire speed range, and broke. Blades that differed in their manufacturing tolerances were subject to much lower vibration stresses. Thus the value of detuning in reducing the vibration stresses is clearly shown. The example demonstrates

S/114/60/000/008/007/010
E194/E255

Off-tuning of Straddle-attached Turbine Blades

the importance of ensuring that the pendulum frequency is detuned from the exciting stresses on "hinged"-root blades. The accurate procedure of formula (8) gave results in close agreement with experiment. The deviation was somewhat greater with a simplified formula (3), which gave results differing from experiment by 6.5-9.5%. There are 7 figures and 2 references; 1 Soviet and 1 non-Soviet.

Card 4/4

DODONOV, B.P.; ZYBIN, V.P., prof., red.

[Hoisting and conveying devices; manual for students specializing in mechanics and technology] Pod"emno-transportnye ustroistva; uchebnoe posobie dlia mekhanicheskikh i tekhnologicheskikh spetsial'nostei. Moskva, Vses. zaochnyi in-t tekstil'noi i legkoi promyshl., 1964. 159 p. (MIRA 18:5)

DODONOV, I. K.

GRANITOV, I.I.; ZAKHIDOV, T.Z., professor, dekter, redakter; POPOV, V.I., professor, dekter, redakter; ROMANOVSKIY, V.I., redakter; DODONOV, I.K., redaktor; KOROVIN, Ye.P., redakter; TSUKERVANIK, I.P., redakter; KORZHENEVSKIY, N.L., redakter; RAYKOVA, I.A., professor, dekter, redakter; YERSHOV, V.V., dotsent, redakter; VOSKOBOYNIKOV, E.A., dotsent; BONDAREVSKIY, L., dotsent, redakter.

[Vegetation map of southwestern Kyzyl-Kum; detailed mapping of desert vegetation] Karta rastitel'nosti iugozapadnykh Kzyl-Kumov; Tashkent, Izd.Sredneaziatskogo gos. univ.1950.84 p.(Tashkent.Universitet. Trudy Sredneaziatskogo gosudarstvennogo universiteta, no.19.Biologicheskie nauki, no.8) (MLRA 9:2)
1.Deystvitel'nyy chlen AN UzSSR (for Romanovskiy, Dodonov, Korovin).
2.Chlen-korrespondent AN UzSSR (for TSukervanik, Korzhenevskiy)
(Kyzyl-Kum--Phytogeography) (Kyzyl-Kum--Desert flora)

260T21

DODONOV, L. D.

USSR/Engineering - Heat, Heat Transfer 11 Jun 53

"New Method of Studying Heat Loss During Boiling of Liquids," P. G. Poletavkin, V. I. Petrov, L. D. Dodonov, I. T. Alad'yev, Power Engineering Inst im G. M. Krzhizhanovskiy

DAN SSSR, Vol 90, No 5, pp 775, 776

Describes new method based on direct electrical heating of an exptl zone inside of thin-walled tube. Protection against overheating of exptl tube is achieved with aid of auxiliary liquid,

260T21

which washes heated surface. Presents results of exptl verification of method. Presented by Acad M. V. Kirpichev 1 Apr 53

DODONOV, L.D

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1748
AUTHOR ALAD'EV,I.T., DODONOV,L.D., UDALOV,V.S.
TITLE The Heat Transfer in Tubes on the Occasion of the Boiling of Not Heated Water.
PERIODICAL Dokl.Akad.Nauk, 111, fasc.3, 593-595 (1956)
Issued: 1 / 1957

The present work deals with the result of the experimental study of the heat transfer in tubes on the occasion of the boiling of not heated water under the pressure of 180 atm.

Methods of Investigation: The test arrangement consisted of a quite simple closed circulation orbit of tubes (type 1X 18 N9T) with an interior and outer diameter of 8,2 and 9,0 mm respectively and with the lengths l = 145 mm and l = 62,5 mm. The inner surface of the tubes was always kept clean by chemical or mechanical means. The investigated part was heated by low voltage parallel current. The temperature of the exterior surface of the tube was measured by means of a resistance thermometer as well as with 6 thermocouples distributed over the length of the tube. From the temperature measured the temperature t_i of the inner surface of the tube was computed in consideration of the temperature drop in the tube wall. The tube circuit was filled with a degassed condensation. Overpressure in the tube was produced and maintained by steam, and circulation (in the investigated part from bottom to top) is produced by means of a pump.

Test results: Tests were carried out at pressures of P = 1,6,11,21,41,81,141,

Dokl.Akad.Nauk,111,fasc.3,593-595 (1956) CARD 2 / 2 PA - 1748

and 181 atm, at specific thermal stresses of $q = (0,5; 1;2; 3;4).10^6$ kkal/m^2 hour, at velocities W of the liquid from 0,5 to 10 m/sec, and at different average temperatures of the liquid in the investigated domain t_f. According to experimental data there is a domain in which t_i does not depend on W and t_f, but only on q and P. Within a domain which is usually called "domain of the development of boiling", the points belong to different W (from 0,55 to 10 m/sec) and t_f (from 196 to 326°) are with good approximation on a straight line which is parallel to the axis of the abscissa. According to these data as well as to those obtained in the tube at other pressures, Δt_k (the significance of which is not explained, but probably it is the temperature difference between the liquid and the exterior of the tube) increases with an increasing q, but at q = const Δt_k decreases with increasing p. The data referring to the developing of boiling can be generalized and described by the following empiric approximation formula: $\Delta t_k = (45-0,11\ t_n)(q.10^{-6})^{0,3+0,0022P}$. This relation and a further one for the coefficient α_k of heat transfer permits the computation of Δt_k and α_k with an accuracy of 10 to 20%, and only at $P \sim 180^0$ does accuracy diminish down to 30 - 40%.

INSTITUTION: Energetical Institute "G.M.KRIZANOVSKIJ" of the Academy of Science in the USSR.

DODONOV, L. D., Engr., and Udalov, V. S., and Alad'yev, I. T. (Cand. Tech. Sci.)

"Heat Transfer and Critical Thermal Fluxes during Boiling of under Heated water in Tubes."

report presented at sci. and tech. session on Heat Exchange during Change of Aggregate State of Matter (by Comm. on High Steam Conditions, Power Inst. AS USSR, and Inst. Thermal Engineering AS UkrSSR) Kiev, 23-29 Sep 57.

Inst. Thermal Engineering, Acad. Sci. Ukr SSR (for Chernobyl'skiy and Balitskiy)
Cent. Boiler Turbine Inst (for Minchenko)
Power Inst. Acad. Sci. USSR.

Dodonov, L. D.

ALAD'YEV, I.T., kandidat tekhnicheskikh nauk; DODONOV, L.D., inzhener; UDALOV, V.S., inzhener.

Heat transfer during boiling of underheated water in pipes. Teploenergetika 4 no.9:64-67 S '57. (MLRA 10:8)

1. Energeticheskiy institut Akademii nauk SSSR.
(Heat--Transmission) (Boilers)

21(9), 24(8)

AUTHORS: Alad'yev, I. T., Dodonov, L. D., Udalov, V. S.

SOV/89-6-1-15/33

TITLE: Critical Thermal Stress During the Flow of Water in Tubes (Kriticheskiye teplovyye nagruzki pri techenii vody v trubakh)

PERIODICAL: Atomnaya energiya, 1959, Vol 6, Nr 1, pp 74 - 78 (USSR)

ABSTRACT: The above-mentioned investigation was carried out at the Laboratoriya teploobmena Energeticheskogo instituta AN SSSR (Laboratory for Heat Transfer of the Power Engineering Institute, AS USSR) in 1956/57.
The apparatus by means of which measurements were carried out, consisted of a closed circuit constructed from chrome nickel steel tubes. Water circulation was brought about by a fly pump. Pressure was produced and controlled by means of a steam-compensator, which, at the same time, supplied the circulation. De-aeration was carried out in an expansion vessel. The necessary water temperature was attained and adjusted by means of a cooling system and a heating device. Investigations were carried out in a drawn thin-walled steel tube (type [illegible]), (diameter of 8.2 mm, wall-thickness 0.4 mm, length 35 - 133 mm).

Card 1/4

The following measurements were carried out: Pressure, water-consumption and -temperature, and temperature of the walls of the tube. Pressure was measured by means of a manometer (accuracy 0.35), water-consumption by means of a water-meter, and water temperature by means of thermocouples fitted before and behind the investigation tube. Thermal stress was calculated from amperage and from the electric resistance of the measuring tube. Amperage was determined from the voltage drop in a shunt (2,000 A/45 mV, accuracy 0.5). Measuring accuracy in each individual case amounted to: q_{crit} (critical thermal stress) 3 - 5%, w (flow velocity) - 3%, $\Delta t_H = t_s - t_{ex}$, ($t_s$ saturation temperature and t_{ex} output temperature) $< 2^{\circ}C$.

Series of tests were carried out at the pressure p = 21, 41, 81, 111, 181 and 201 atm and water velocities of 1, 2, 5 and 8 m/sec. In each series q_{crit} was measured with constant p and w and variable Δt_H. Measuring results are shown

graphically and permit the following conclusions to be drawn:

a) The dependence q_{crit} on p, ω and Δt_H is complex.

b) With an increase of the p-value from 40 to 300 atm q_{crit} decreases. At p = 20 and 40 atm the q_{crit} values are practically equal.

c) With increasing ω q_{crit} increases too. With p = 20, 40 and 80 atm and $\Delta t_H < 20^\circ$ an influence exercised by ω is hardly noticeable. On the strength of an analysis of the results obtained by this work and from publications dealing with this field the following may be said:

a) The value of the critical thermal stress of water flowing in tubes ($d \geq 8$ m) or double channels (spacing $h \geq 8$ mm) under pressures of from 20 to 200 atm which has not yet reached saturation temperature, can be derived from the results obtained by the work discussed. In the case of $p \geq 100$ the works (8) and (9) can be used. The data

supplied by the abstracted paper agree with those of (3), (4), and (9) up to 25%.

b) The shape of the channel (diameter, spacing) exercises a certain influence upon q_{crit} under certain conditions, which must be checked if conditions change.

c) In reference (7) no pressure-dependence of the q_{crit} value was found with p = 1 - 21 atm. This result is doubtful. There are 3 figures and 10 references, 5 of which are Soviet.

SUBMITTED: September 3, 1958

Dodonov, L.D.

PHASE I BOOK EXPLOITATION SOV/4396

Akademiya nauk SSSR. Energeticheskiy institut

Konvektivnyy i luchistyy teploobmen (Convection and Radiation Heat Exchange) Moscow, Izd-vo AN SSSR, 1960. 254 p. Errata slip inserted. 3,200 copies printed.

Ed.: M.A. Mikheyev, Academician; Ed. of Publishing House: G.B. Gorshkov; Tech. Ed.: V.V. Bruzgul'.

PURPOSE: The book is intended for scientists and engineers working in various branches of science and industry concerned with thermodynamics and heat transfer problems.

COVERAGE: The book consists of 19 original articles on various problems in thermodynamics. The following subjects are discussed: mechanism of heat transfer processes, intensification of heat exchange, determination of thermophysical properties of operating media, heat transfer in supersonic flow of gas, and combustion chambers and nuclear reactors. Theory and experimental techniques are described. Each article describes the conditions of the experiment and tables of the experimental data obtained are given. The data may be used for calculations of heat transfer and heat exchangers, always taking account of

Card 1/5

AVAILABLE: Library of Congress

DODONOV, L. D.

Cand Tech Sci - (diss) "Heat transfer and critical heat flows in boiling of non-underheated /nedogretaya/ water in pipes." Moscow, 1961. 12 pp; (Ministry of Higher and Secondary Specialist Education RSFSR, Moscow Engineering Physics Inst); 140 copies; price not given; (KL, 6-61 sup, 217)

ACC NR: AP6025058 SOURCE CODE: UR/0281/66/000/002/0136/0144

AUTHOR: Alad'yev, I. T. (Moscow); Gorlov, I. G. (Moscow); Dodonov, L. D. (Moscow); Korolev, V. S. (Moscow); Fedynskiy, O. S. (Moscow)

ORG: none

TITLE: Critical heat flows and heat emission with potassium boiling in pipes

SOURCE: AN SSSR. Izvestiya. Energetika i transport, no. 2, 1966, 136-144

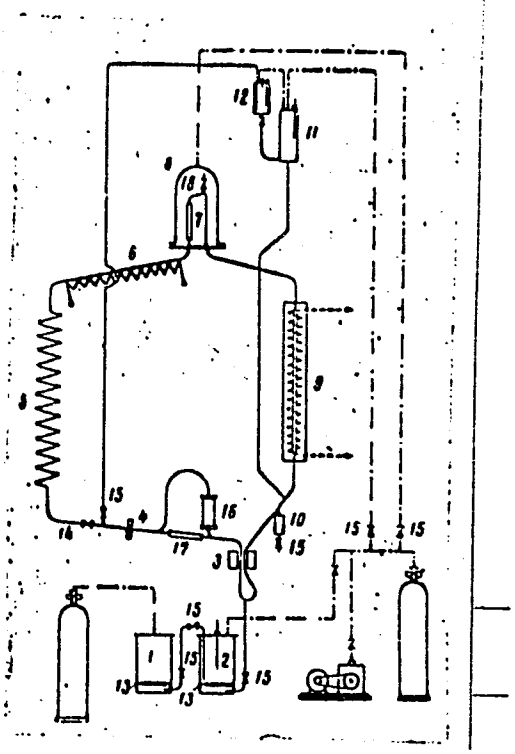
TOPIC TAGS: potassium, heat flow, pipe flow, physical property, liquid

ABSTRACT: The authors discuss the results of experimental studies into critical heat flows and heat emission with flowing potassium boiled in tubes under pressures of 1.1--1.3 bar. This research was conducted at ENIN im. G. M. Krzhizhanovskiy in the period from 1960 to 1964. Two identical test facilities were used for these studies, and consisted of a closed-loop circulatory system with tubing made of 1Kh18N9T stainless steel. The potassium was circulated by means of an electromagnetic pump, with discharge measured by an electromagnetic flowmeter, systematically calibrated against a volumetric flowmeter. A block diagram of the test rig is shown in Fig. 1. Test methodology and result processing techniques are discussed. Preliminary argon blow-through of the system was employed, and the commercial potassium employed (TU No. 2010 55) had a melting temperature of 333.6 K. It is found that: 1) the general laws governing critical heat flows and heat emission for boiling potassium are the same as

Card 1/3 UDC: 536.248.2:546.32.536.423.1

ACC NR: AP6025058

Diagram of test set up: 1 - overflow reservoir, 2 - system reservoir, 3 - electromagnetic pump, 4 - electromagnetic flowmeter, 5 - primary heating element, 6 - auxiliary heating element, 7 - experimental section, 8 - protective covering, 9 - cooling unit, 10 - diffusion trap, 11 - variable level tank, 12 - volumetric flow-meter, 13 - reticulate filter, 14 - control valve, 15 - stopper valve, 16 - cold trap, 17 - analysis sampling, 18 - (air) valve



for conventional liquids used as heating surface wetting agents; 2) critical heat flows for potassium at p_s=1 - 2 bar, K = 1 - 1.5, and x_{in} <0 are described by the equation

$$q_{cr} = 0.4\ w\rho^{0.8}\ \frac{1 + 5.10^{-4}\Delta theat}{(1/d)^{0.8}}\ \frac{mw}{m^2}$$

which is valid in the parameter range studies; and

Card 2/3

ACC NR: AP6025058

3) heat emission with intensive boiling of potassium in tubes of molybdenum and stainless steel, in the parameter range studied, can be described by the equation

$$\alpha = 3.2q^{0.7} \text{ W/m}^2 \text{ deg.}$$

SUB CODE: 20, 11/ SUBM DATE: 14Jul65/ ORIG REF: 008/ OTH REF: 005

Card 3/3

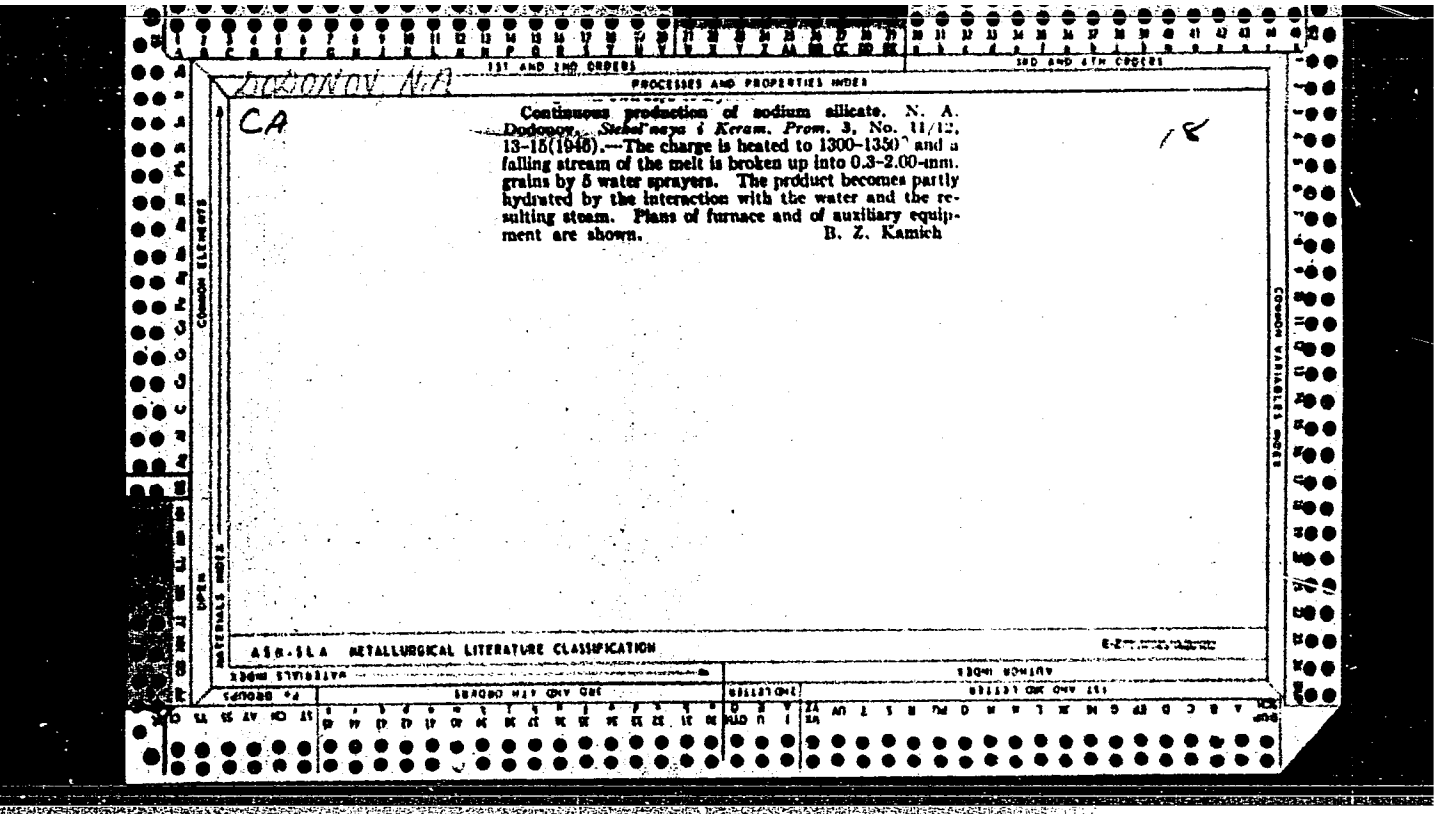
DODONOV, N.

Authors: Azarkh, M. Sidorov, V., Engineers

Title: "Elektronit" (Elektronit)

Periodical: Nauka i zhizn', 1959, Nr. 4, p 67 (USSR)

Abstract: Recently a new material "elektronit" for electric insulation was developed by Engineer F. Gorshkov of the "Dinamo" Plant in cooperation with N. DODONOV, Engineer of the Tsentral'naya nauchno-issledovatel'skaya laboratoriya asbesta (Central Scientific Research Laboratory of Asbestos). The basis materials used for elektronit are asbestos fibres and synthetic rubber. In comparison with the gnerally applied micaceous material, elektronit possesses many advantages. It has a very high electric strength and can be used in devices operating under 600 volts and, as has been recently proved in tests, even up to 3,000 volt. There are 3 photos.



Dodonov N.A.

CA

PROCESSES AND PROPERTIES INDEX

Continuous production of sodium silicate. N. A. Dodonov. *Steklo i Keram. Prom.* 3, No. 11/12, 13–15(1946).—The charge is heated to 1300–1350° and a falling stream of the melt is broken up into 0.3–2.00-mm. grains by 5 water sprayers. The product becomes partly hydrated by the interaction with the water and the resulting steam. Plans of furnace and of auxiliary equipment are shown. B. Z. Kamich

18

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1. DODONOV, N. A.

2. USSR (600)

4. Hollow Brick, Tile, etc.

7. Improved types of hollow ceramic stone blocks. Biul. stroi. tekh. no. 23 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

DODONOV, N.A.

Projects for standard shops reworking metallic slag. Biul.stroi.tekh. 10 no.13:35-36 Ag '53. (MLRA 6:10)

1. Ministerstvo Promyshlennosti Stroitel'nykh Materialov. (Slag)

Min of Const. Mat. Ind.

S/064/60/000/004/017/021/XX
B013/B060

AUTHORS: Dodonov, N. T., Zazulina, Z. A.

TITLE: Acidproof Fluorlon Packings

PERIODICAL: Khimicheskaya promyshlennost', 1960, No. 4, p. 75

TEXT: This is a report on the use of Fluorlon fibers for packings. These fibers are characterized by a low coefficient of friction, a high mechanical strength, and a high "elementary number" of the individual fibers, which guarantees their good packing properties. As for its resistance to the action of aggressive media, Fluorlon outruns such synthetic substances as Chlorin and Nitron, as may be seen from results obtained from tests in different media at 20°C in the course of 60 days. Stuffing-box packings made of Fluorlon are impregnated with a fluoro ethylene-4-suspension or with fluoro carbon mixtures. For a comparison, packings made of Fluorlon, of impregnated asbestos of the АП (AP) type, as well as acidproof КПС-1 (KPS-1) packings were lab-examined in mineral acids at 80°C. Their quality was evaluated on the basis of

Card 1/2

Acidproof Fluorlon Packings

S/064/60/000/004/017/021/XX
B013/B060

decreasing elasticity and changes of weight. The results obtained indicate that Fluorlon packings are ectremely stable against the action of aggressive media. Fluorlon packings were tested in petroleum- and chemical plants. In sulfuric media these packings withstood an uninterrupted service period of six months. Under these conditions, other packings, by contrast, are worn out after 15 days at most. The relatively high price of Fluorlon packings is compensated by their long serice life. There are 2 tables.

Card 2/2

30464

S/138/61/000/011/006/007
A051/A126

17.1206
159440

AUTHORS: Dodonov, N. T., Khartke, K. V.

TITLE: Fibrous asbestos materials as a replacement for asbestos fabrics

PERIODICAL: Kauchuk i rezina, no. 11, 1961, 35 - 38

TEXT: The possibility of producing fibrous materials from non-textile types of asbestos to replace asbestos fabrics used in thermal insulations, and the possibility of producing asbomasticated rubbers from the latter, was confirmed by the authors. The heat-insulating capacity of the produced material - asbothermoinsul, exceeds the heat-insulating capacity of asbestos fabrics by more than a factor of 2. The fibrous material asboplast, used as filler in the production of asbomasticated rubbers, results in the production of articles having mechanical properties twice as great as articles produced from asbestos fabric. The work was conducted at the fabric-weaving laboratory of the All-Union Scientific Research and Designing and Technical Institute of Asbestos Commercial Articles (VNIIATI), and at the Laboratory of Commercial-type paper of the Leningrad Scientific Research Institute of the Cellulose and Paper Industry (TsNIIB). The ЦНИИБ(TsNIIB) pilot plant equipment, intended for the production of equistable long fibrous pa-

Card 1/3

per by the dry method, was applied. The new material produced by the described method was based on non-textile types of asbestos and cotton glued together with an aqueous emulsion of thermoreactive silicon-organic resin. The physico-mechanical characteristics of the asbothermoinsul and asbestos fabric AT-7 are listed in Table 1. The asbomasticated rubbers were produced from asboplasts of a given composition according to the industrial procedure employed by electro-commercial industrial plants. The higher physico-mechanical characteristics of the asboplast, as compared to those of asboplasts produced from the AT-1 fabric, are explained by a more complete exploitation of the high mechanical properties of asbestos. Data obtained confirmed the expediency of introducing industrial production of asbothermoinsul and asboplast. The latter is considered to be cheaper. The All-Union Conference on Heat-Resistant Asbestos Fabrics (April 12, 1960) adopted a resolution for the immediate introduction of these materials in industry. There are 3 tables and 1 figure.

ASSOCIATIONS: Vsesoyuznyy nauchno-issledovatel'skiy i konstruktorsko-tekhnologicheskiy institut asbestovykh tekhnicheskikh izdeliy, g. Yaroslavl' i Vsesoyuznyy nauchno-issledovatel'skiy institut tsellyuloznoy i bumazhnoy promyshlennosti, g. Leningrad (All-Union Scientific Research

and Designing and Technical Institute of Asbestos Commercial Articles city of Yaroslavl', and the All-Union Scientific Research Institute of the Cellulose and Paper Industry, city of Leningrad)

Table 1. Physico-mechanical characteristics of asbestothermoinsul and asbestos fabric AT-7

Indices	Asbesto-thermoinsul	asbestos fabric AT-7 (GOST 6102-52)
volumetric weight, g/cm3	0.58	0.58
thermal conductivity coefficient, kcal/m·hr·°C (at 100°)	0.06	0.14
losses during annealing at 700°C, for a period of 2 hrs, %	28.6	32.0
tensility in the initial state, kg/cm2 . . .		
along the base	11.0	65.0
along the weft	11.0	40.0

Card 3/3

DODONOV, N.T., inzh.

Use of asbestos-glass fabrics in shipbuilding. Sudostroenie 28 no.2:59-61 F '62. (MIRA 15:3)
(Shipbuilding--Equipment and supplies) (Insulation (Heat))

DODONOV, N.T., inzh.

New heat insulating material "Asboteploizol" for the shipbuilding industry. Sudostroenie 29 no.5:37-38 My '63. (MIRA 16:9)
(Insulation (Heat)) (Shipbuilding materials)

DODONOV, N.Z., inzhener.

Laboratory experiment with the use of lacquer to change the profile of a model blade. Trudy Besh.inst.transp.mashinostr.no.15:60 '55.
(Blades) (Lacquer and lacquering) (MLRA 10:2)

KULYABKO, V. (Volzhskiy Volgogradskoy obl.); SAKHANOV, Yu., inzh. (Volzhskiy Volgogradskoy obl.); DODONOV, P., inzh. (Volzhskiy Volgogradskoy obl.); FARAFONOV, M. (Volzhskiy Volgogradskoy obl.)

Eight and a half kopeck per ton. Izobr.i rats. no.5 (201):35 '63. (MIRA 16:7)

(Cement--Transportation)

RAZUVAYEV, G.A.; PETUKHOV, G.G.; DODONOV, V.A.

Mechanism of the chain termination reaction in the radical polymerization of vinyl chloride in the presence of C^{14} tagged initiators. Vysokom.soed. 3 no.10:1549-1553 O '61. (MIRA 14:9)

1. Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom gosudarstvennom universitete imeni N.I. Lobachevskogo.
(Vinyl compound polymers) (Carbon--Isotopes)

ACCESSION NR: AP4025005 S/0062/64/000/003/0426/0430

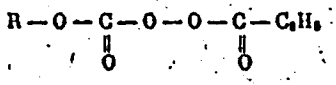
AUTHOR: Razuvayev, G. A.; Dodonov, V. A.; Etlis, V. S.

TITLE: Perbenzoylalkyl(aryl)carbonates.
Communication 1. Polymerization initiators for vinyl compounds.

SOURCE: AN SSSR. Izv. Seriya khimicheskaya, no. 3, 1964, 426-430

TOPIC TAGS: perbenzoylalkylcarbonate, perbenzoylarylcarbonate, synthesis, polymerization initiator, vinyl chloride, methylmethacrylate, polymerization, mixed acyl peroxide, benzoate radical, alkyloxy radical, phenoxy radical, perbenzoylmethylcarbonate, perbenzoylcyclohexylcarbonate, activation energy, polymerization rate

ABSTRACT: Mixed acyl peroxides were synthesized; these will decompose thermally to form simultaneously, benzoate and alkyloxy radicals and thus act as effective polymerization initiators for vinyl compounds. Perbenzoylalkyl(aryl)carbonates of the general formula



Card 1/3

ACCESSION NR: AP4025005

where R = CH_3, C_6H_5 or C_6H_{11} were synthesized by reacting the appropriate alkyl or aryl chloroformate with perbenzoic acid salts in ether solution at 10 C with vigorous agitation:

$$R'-O-\overset{\overset{O}{\|}}{C}-Cl + MetOOC-C_6H_5 \rightarrow R'-O-\overset{\overset{O}{\|}}{C}-OO-\overset{\overset{O}{\|}}{C}-C_6H_5 + MetCl$$

The R = CH_3 compound is a liquid; the other two are white crystalline materials. All are insoluble in water, soluble in organics and can be stored at low temperatures for a long time. Perbenzoylphenylcarbonate is not a polymerization initiator since it forms phenoxy radicals which inhibit radical processes. Perbenzoylmethyl- and perbenzolycyclohexyl- carbonates are effective initiators. At 35 C their activity is 10 times greater than that of benzoyl peroxide in vinyl chloride polymerization; at 45 C it is 6-7 times greater for methylmethacrylate polymerization. They are also effective at temperatures of 25-30 C. The apparent activation energy of perbenzoylcyclohexylcarbonate on the polymerization of methylmethacrylate is 13.9 kcal/mol and for vinyl chloride, E is approximately 12.8 kcal/mol. The rate of vinyl chloride polymerization is proportional to the square root of the initiator concentration. Orig. art. has: 1 table, 4 figures and 2 equations.

Card 2/3

ACCESSION NR: AP4025005

ASSOCIATION: Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom gosudarstvennom universitete im. N. I. Lobachevskogo (Scientific Research Institute for Chemistry at the Gorkovsk State University)

SUBMITTED: 08Oct62 DATE ACQ: 17Apr64 ENCL: 00

SUB CODE: GC NO REF SOV: 001 OTHER: 003

Card 3/3

ACCESSION NR: AP4025006 S/0062/64/000/003/0430/0435

AUTHOR: Razuvayev, G. A.; Dodonov, V. A.; Mory*ganov, B.N.

TITLE: Perbenzoylalkyl(aryl) carbonates. Communication 2. Reaction of perbenzoylcyclohexylcarbonate with certain organic solvents.

SOURCE: AN SSSR. Izv. Seriya khimicheskaya, no. 3, 1964, 430-435

TOPIC TAGS: perbenzoylalkylcarbonate, perbenzoylarylcarbonate, perbenzoylcyclohexylcarbonate solvent complex, decomposition, kinetics, activation energy, thermal reaction, benzoate radical cyclohexyloxy radical, reactivity

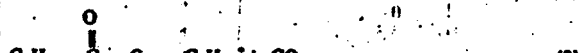
ABSTRACT: The kinetics of the decomposition of perbenzoylcyclohexylcarbonate (PCC) in benzene and in n-heptane were studied. The decomposition reaction is a first order reaction. The activation energy (E) of the disintegration of PCC in benzene and n-heptane is 23.5 and 25.8 kcal/mol. The thermal reaction of PCC in benzene, n-heptane and isopropanol was studied; the reaction products were identified and determined quantitatively. Preliminary investigation showed reaction in $CHCl_3$ and CCl_4 was complex with evolution of HCl, hence this was pursued no further. PCC decomposition results in the following radical formation

Card 1/3

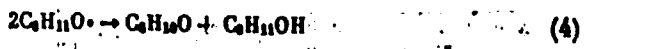
and decomposition:

(1)

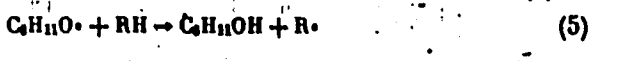
(2)



(3)



(4)



(5)

The benzoate and cyclohexyloxy radical react with solvents almost as well as radicals obtained by the decomposition of symmetrical peroxides such as benzoyl peroxide or dicyclphexylperoxydicarbonate (activation energy about 30 kcal/mol). "V. N. Fofanova took part in the experimental work." Orig. art. has: 6 equations, 3 figures and 1 table.

Card 2/3.

ACCESSION NR: AP4025006

ASSOCIATION: Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom gosudarstvennom universitete im. N. I. Lobachevskogo (Scientific Research Institute of Chemistry at the Gorkiy State University).

SUBMITTED: 08Oct62 DATE ACQ: 17Apr64 ENCL: 00

SUB CODE: GC,OC NO REF SOV: 009 OTHER: 004

Card 3/3

AUTHOR: [illegible], L. A., Tetukhov, G. G., Razuvayev, G. A.

TITLE: [illegible] polyvinyl chloride and [illegible] perties of the polyene obtained

SOURCE: AN SSSR, Izvestiya. Seriya khimicheskaya, no. 6, 1965, [illegible]

TOPIC TAGS: polyvinyl chloride, polyene, electron spin resonance, [illegible] nation

ABSTRACT: In order to elucidate the part played by certain properties [illegible] polyene [illegible], a study was made of the detachment of hydrogen chloride from [illegible] (PVC) was carried out in the presence of glycol monomethyl ether [illegible] 50-60°. The polymer was precipitated twice and had a molecular [illegible] The polyene formed gave a strong ESR signal with a g factor [illegible] that of diphenylpicrylhydrazine. The concentration of paramagnetic particles was [illegible] per gram of polyene. The signal width and lack of hyperfine [illegible] indicate a substantial delocalization of the unpaired electrons. [illegible] of the signal changed markedly under the influence of atmospheric [illegible]

Card 1/2

L 50601-65
ACCESSION NR: AP5017965

of a decrease in the average degree of unpairing. On prolonged [illegible] the polyene oxidizes irreversibly. It added halogens, and [illegible] catalytic effect on the chlorination of certain hydrocarbons (n-hexane, benzene). The chlorination products contained mono-, di-, and higher chlor[illegible] hydrocarbons.

ASSOCIATION: Nauchno-issledovatel'skiy institut khimii Gor'kovskogo gosudarstvennogo [illegible] Scientific Research Institute of Chemistry, Gor'kiy State University

SUBMITTED: [illegible] ENCL: 00 SUB CODE: [illegible]

NO REF SOV: 003 OTHER: 004

Card 2/2

L 00654-67 EWT(m)/EWP(j)/T RM

ACC NR: AP6027804 SOURCE CODE: UR/0063/66/011/002/0202/0207

14
12
13

AUTHOR: Razuvayev, G. A. (Professor); Terman, L. M.; Dodonov, V. A.

ORG: none

TITLE: Reactions of alkoxy radicals in the liquid phase

SOURCE: Vsesoyuznoye khimicheskoye obshchestvo. Zhurnal, v. 11, no. 2, 1966, 202-207

TOPIC TAGS: chemical decomposition, radical polymerization, carbonic acid, organic solvent, nonmetallic organic derivative, chemical reaction, benzoyl peroxide, carbonate, phenyl compound, alkyl radical

ABSTRACT: A study was made of the reactivity of simple oxygen radicals obtained by the decomposition of esters of percarbonic acid and certain other compounds in various organic solvents. The following derivatives of percarbonic acid were investigated: Dialkyl-(phenyl)-peroxydicarbonates, Peracyl-alkyl (aryl)-carbonates, bis-/1-alkyl (phenyl)-percarbonatocycloalkyl/-peroxides, Percarbonates with a radical containing a three-membered ring and ter-alkyl-N-benzoylperoxycarbamates.

The decomposition reactions of certain new peroxides were also investigated:

Methoxymethyl-alkyl-peroxides:

$$RO\text{-}OCH_2\text{-}OCH_3 \longrightarrow RO + {}^{\cdot}OCH_2\text{-}OCH_3$$

where R = tert-butyl; cumene.

Card 1/2 UDC: 547.024 + 532

L 00654-67

ACC NR: AP6027804

Peroxide compounds of mercury:

$R'HgO-OR \longrightarrow RO\cdot + R'Hg\cdot \text{ --- } RO\cdot + (O) + R'Hg\cdot$ or $R'HgO + \dot{R}O$

where R = cumene; R' = phenyl, benzyl.

Isopropylate of iso-propylmercury:

$RHgOR \longrightarrow RHg\cdot + RO\cdot$

where R = iso-propyl.

Some of the obtained peroxides appear to be very active initiators of the polymerization of vinyl monomers. Dialkylperoxydicarbonates were studies in detail for this purpose. The constants of the rate of polymerization initiated by benzoyl peroxide and the dinitrile of azoisobutyric acid, and percarbonatees were determined. The rate of polymerization in the presence of the percarbonates is significantly higher than in the presence of other substances. The initiating activity increases with the increase in molecular weight of the parcarbonates and with branching of the radical. The introduction of the phenyl group in the alkyl radical decreases the polymerization rate constant. Orig. art. has: 7 formulas and 3 tables. [JPRS: 36,455]

SUB CODE: 07 / SUBM DATE: none / ORIG REF: 017 / OTH REF: 003

Card 2/2 vlr

DODONOV, V.N.; KATS-CHERNOKHVOSTOVA, L.Ya., professor, zaveduyushchiy kafedroy.

Early release of patients with scarlet fever. Pediatriia no.3:9-13 My-Je '53. (MLRA 6:8)

1. Kafedra epidemiologii I Moskovskogo ordena Lenina meditsinskogo instituta. (Scarlet fever)

DODONOV, V.N.

"Problems of the early dismissal of scarlet fever cases." Tr. from the Russian. p. 114. (ANALELE ROMANO-SOVIETICE. SERIA PEDIATRIE., Series a III-a, Vol. 6, no. 6, Nov./Dec. 1953, Bucuresti, Rumania)

SO: Monthly List of East European Accessions, L. C., Vol. 3, No. 4, April 1954, Uncl.

DODONOV, V.N.

Dynamics of harboring streptococci in the body in scarlet fever areas. Sov.med. 17 no.11:39-40 N '53. (MLRA 6:12)

1. Iz kafedry epidemiologii (zavednyushchiy - professor L.Ya.Kats-Chernokhvostova) I Moskovskogo ordena Lenina meditsinskogo instituta.
(Scarlet fever)

DODONOV, V.N.

Training of public health physicians in the Chinese Peaple's Republic. Sov.zdrav. 15 no.2:58-61 Mr-Ap '56. (MLRA 9:7)

1. Iz kafedry epidemiologii (ispolnyayushchiy obyazanosti zaveduyushchiy kafedroy N.D.Belikova-Aldakova) I Moskovskogo ordena Lenina meditsinskogo instituta.
(CHINA--MEDICINE--STUDY AND TEACHING)

BELIKOVA-ALDAKOVA, V.D., dotsent; DODONOV, V.N., dotsent

"Course in special epidemiology." V.A.Bashenin. Reviewed by V.D. Belikova-Aldakova, V.N.Dodonov. Sov.med. 20 no.6:92-95 '56. (MLRA 9:9)
(EPIDEMIOLOGY)
(BASHENIN, V.A.)

DODONOV, V.N.; TAVROVSKAYA, Ye.V.

Problem of epidemiology of rheumatism in children. Zhur.mikrobiol. epid. i immun. 27 no.12:50-54 D '56. (MLRA 10:1)

1. Iz kafedry epidemiologii I Moskovskogo ordena Lenina meditsinskogo instituta imeni Sechenova i detskoy poliklinik Sverdlovskogo rayona.
(RHEUMATISM, in infant and child, epidemiol. (Rus))

nb, Clin of Epid, I

DODONOV, V.N., kand.med.nauk (Moskva)

Anginas and rheumatic fever. Fel'd. i akush. 24 no.9:3-6 S '59.
(MIRA 12:12)

(THROAT--DISEASES) (PNEUMATIC FEVER)

BELIKOVA-ALDAKOVA, V.D.; DODONOV, V.N.

"Preventive inoculation" by A.L. Nikol'skii. Reviewed by V.D. Belikova-Aldakova, V.N. Dodonov. Zhur.mikrobiol.epid. i immun. 30 no.9:150-152 S '59. (MIRA 12:12)

(VACCINATION) (NIKOL'SKII, A.L.)

BELIKOVA-ALDAKOVA, V.Dl; DODONOV, V.N.; ZHERIKOVA, A.D.; ZHOGOVA, M.A.; KLIMENKO, Ye.P.; LEVTOVA, K.Z.; MITROFANOVA, Ye.B.; PANTELEYEVA, T.B.; SOLOV'YEVA, N.A.

Results of smallpox vaccination in various age groups. Zhur. mikrobiol. epid. i immun. 31 no. 10:28-32 O '60. (MIRA 13:12)

1. Iz kafedry epidemiologii I Moskovskogo ordena Lenina meditsinskogo instituta imeni Sechenova.
(SMALLPOX)

DODONOV, V.N.; TAVROVSKAYA, Ye.V.

Further considerations on the epidemiology of rheumatic fever in children. Zhur.mikrobiol.epid.i immun. 31 no.11:136-141 N '60. (MIRA 14:6)

1. Iz Moskovskogo ordena Lenina meditsinskogo instituta imeni Sechenova i detskoy poliklinik Sverdlovskogo rayona.
(RHEUMATIC FEVER)

DODONOV, V.N.

"Disinfection and insect and rat extermination" by I.P. Stepanov. Reviewed by V.N. Dodonov. Zhur. mikrobiol. epid. i immun. 32 no. 3: 143-145 Mr '61. (MIRA 14:6)
(DISINFECTION AND DISINFECTANTS) (PESTS—EXTERMINATION)
(STEPANOV, I.V.)

BELIKOVA-ALDAKOVA, V.D.; DODONOV, V.N. (Moskva)

Increase the role of journals for subprofessional medical workers in their sanitary and epidemiological work. Sov.zdrav. 21 no.10: 90-92 '62. (MIRA 15:10)

(EPIDEMIOLOGY--PERIODICALS)

BELIKOVA-ALDAKOVA, V.D., dotsent; DODONOV, V.N., dotsent

"Handbook on the use of vaccines and serums" by M.I. Sokolov, P.V. Pavlov. Sov. med. 26 no.11:152-155 N'62 (MIRA 17:3)

DODONOV, V.N., dotsent

Technique of disinfecting measures. Med. sestra 22 no.5: 51-55 My '63. (MIRA 16:8)
(DISINFECTION AND DISINFECTANTS)

DODONOV, V.N., kand.med.nauk (Moskva)

Importance of disinfection in the control of infectious diseases. Fel'd. i akush. 28 no.2:5-8 F'63. (MIRA 16:9)
(COMMUNICABLE DISEASES—PREVENTION)
(DISINFECTION AND DISINFECTANTS)

BELIKOVA-ALDAKOVA, V.D.; DODONOV, V.N.

Teaching epidemiology at a medical faculty. Zhur. mikrobiol., epid. i immun. 40 no.6:58-63 Je '63. (MIRA 17:6)

1. Iz I Moskovskogo ordena Lenina Meditsinskogo instituta imeni Sechenova.

DODONOV, Ya.Ya.; BORZOVA, L.D.; POKAYEVSKAYA, V.S.

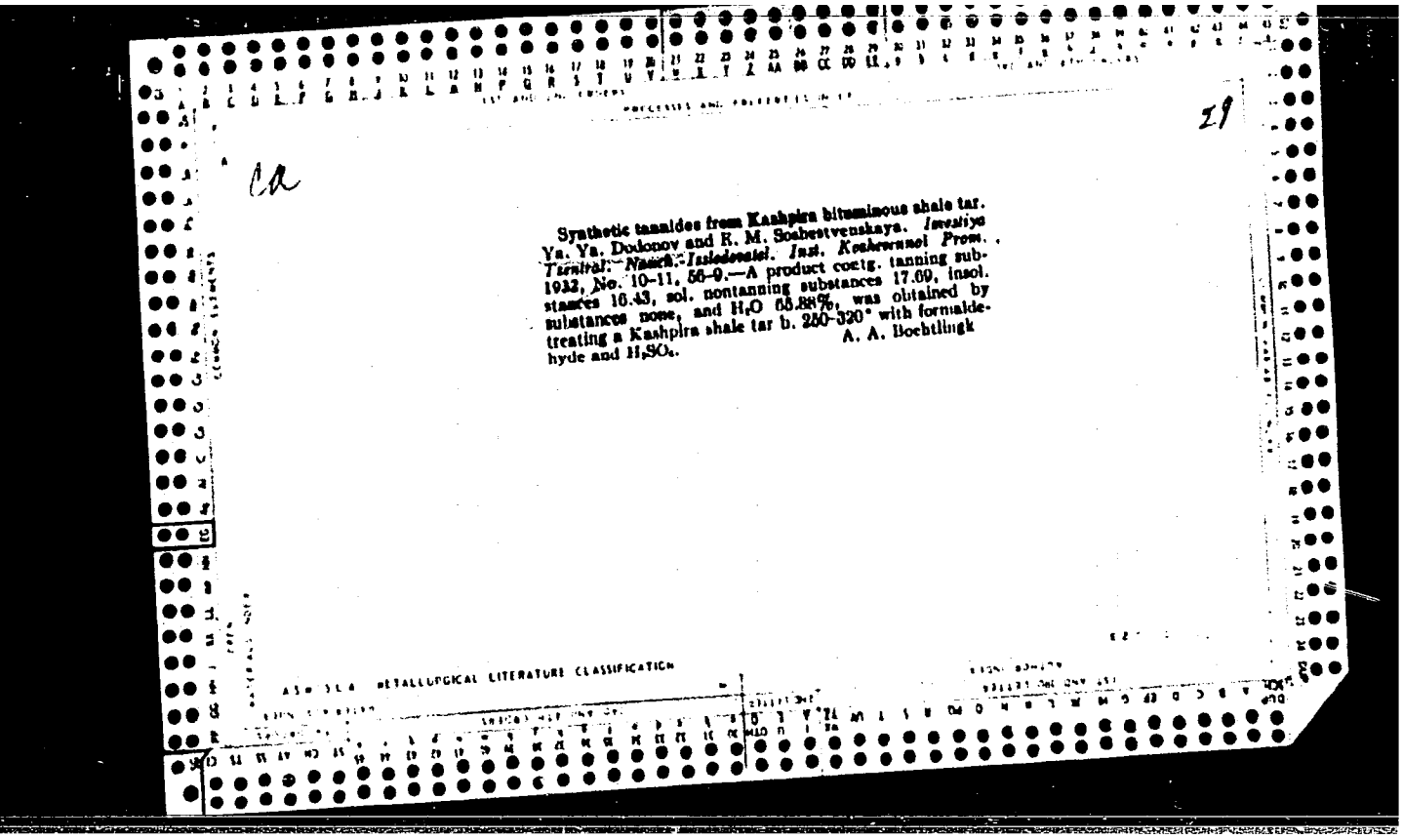
Synthesis of a creolin-type preparation from Volga shale oils and its use in veterinary medicine. Uch.zap. SGU 75:20-22 '62. (MIRA 17:3)

BORZOVA, L.D.; DODONOV, Ya.Ya.; KOLOSOVA, V.S.; LOBACHEVA, N.B.

Characteristics of the oil shales of the Khvalynsk deposit. Energotekh. ispol'.topl.no.3:212-214 '63.

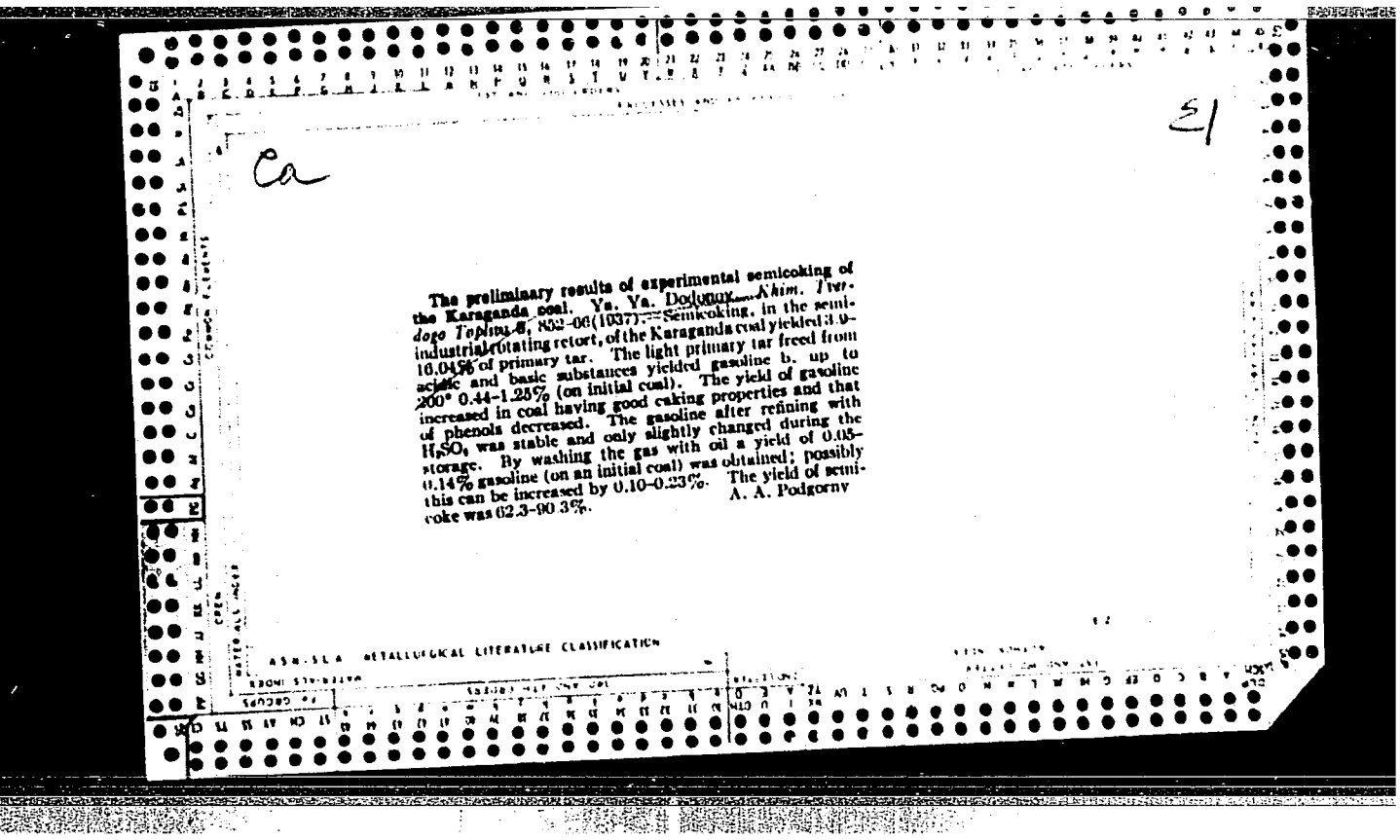
(MIRA 16:5)

(Khvalynsk District--Oil shales)



Synthetic tanalides from Kashpira bituminous shale tar. Ya. Ya. Dodonov and E. M. Soobestvenskaya. *Iswestiya Tzentral. Nauch. Issledovatel. Inst. Kozhevennoi Prom.*, 1932, No. 10–11, 56–9.—A product coctg. tanning substances 16.43, sol. nontanning substances 17.69, insol. substances none, and H_2O 65.88%, was obtained by treating a Kashpira shale tar b. 250–320° with formaldehyde and H_2SO_4.

A. A. Boehtlingk



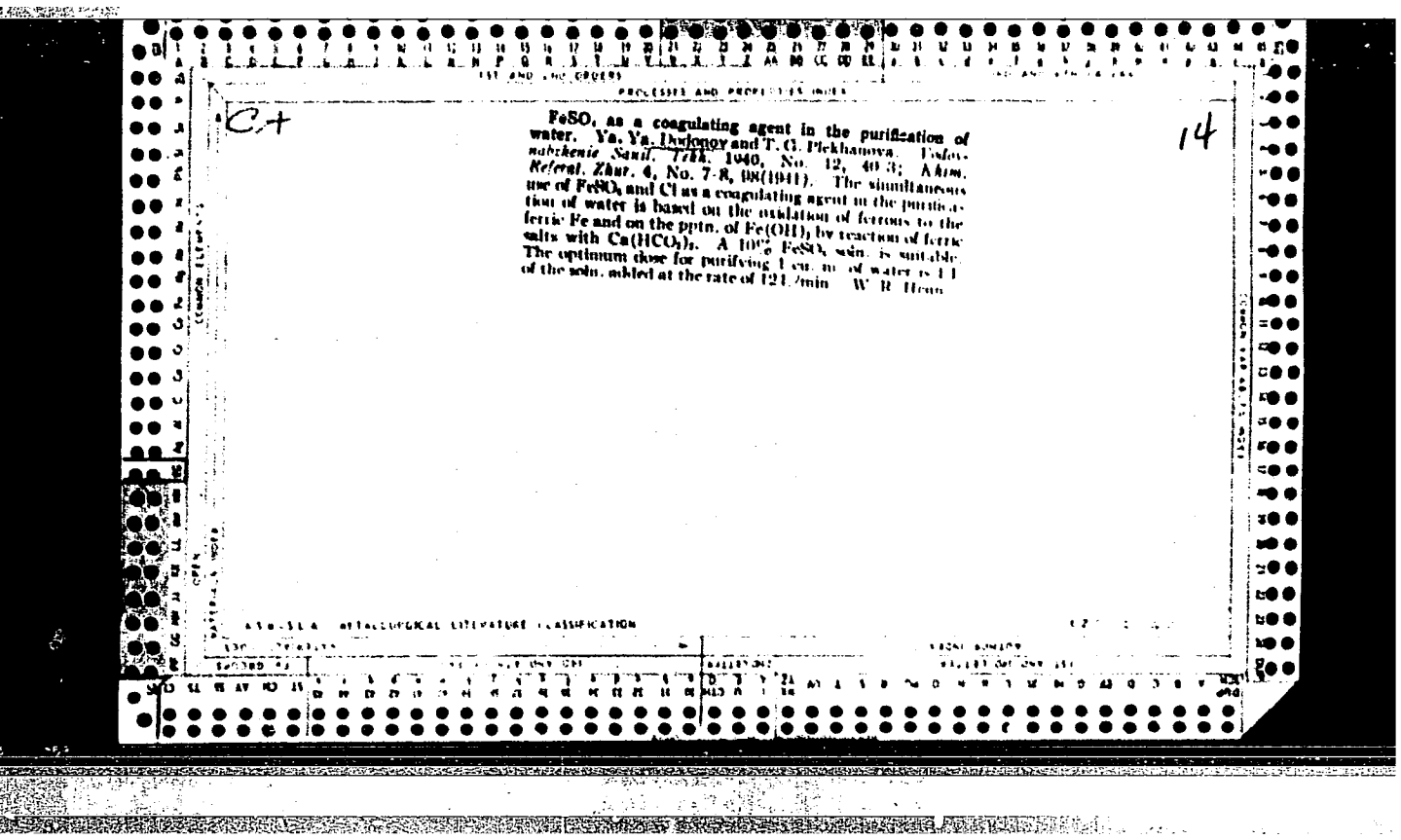
Ca

51

The preliminary results of experimental semicoking of the Karaganda coal. Ya. Ya. Dolgov. *Khim. Tverdogo Topliva*, 8, 852–66(1937).—Semicoking, in the semi-industrial rotating retort, of the Karaganda coal yielded 3.0–16.04% of primary tar. The light primary tar freed from acidic and basic substances yielded gasoline b. up to 200° 0.44–1.25% (on initial coal). The yield of gasoline increased in coal having good caking properties and that of phenols decreased. The gasoline after refining with H_2SO_4 was stable and only slightly changed during the storage. By washing the gas with oil a yield of 0.05–0.14% gasoline (on an initial coal) was obtained; possibly this can be increased by 0.10–0.23%. The yield of semi-coke was 62.3–90.3%.

A. A. Podgorny

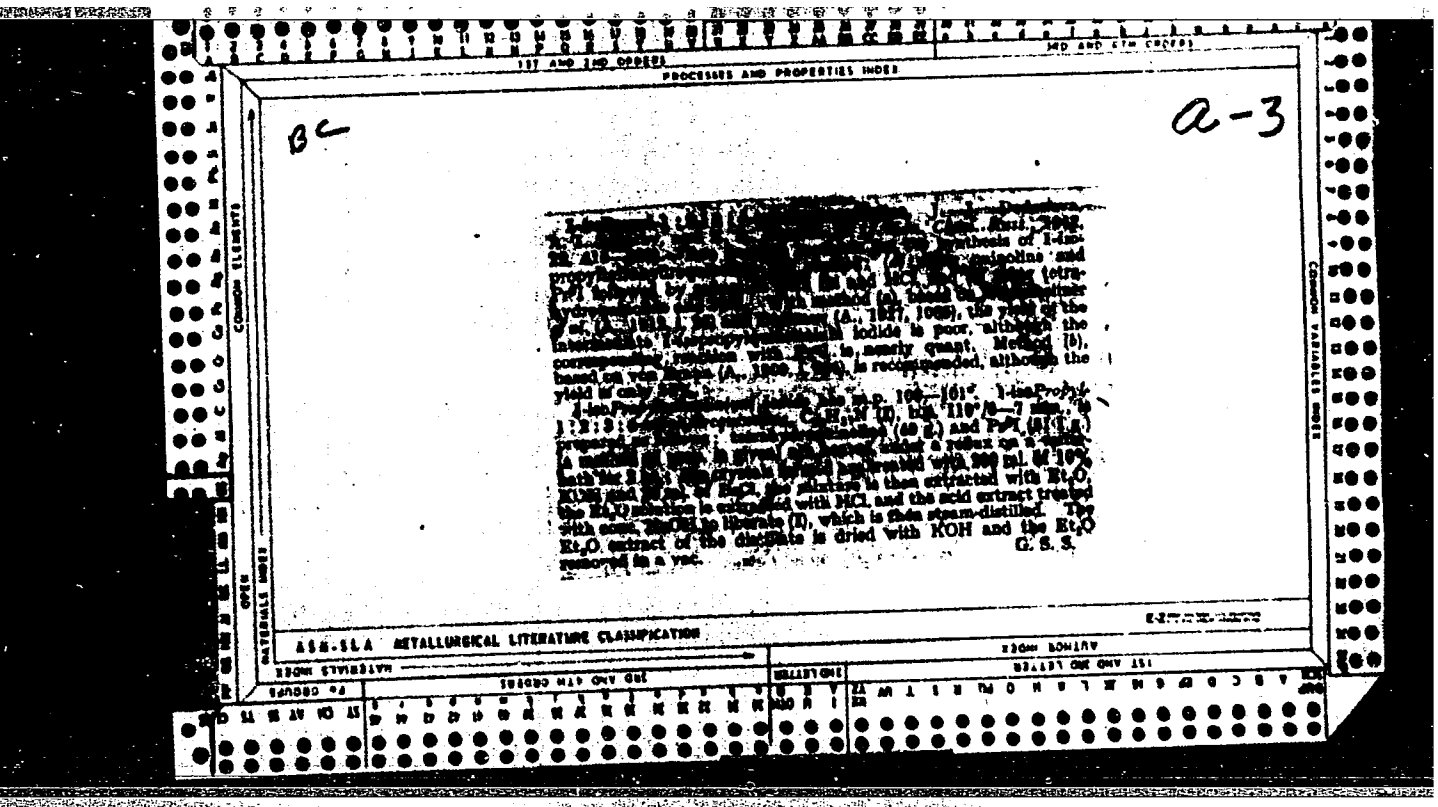
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

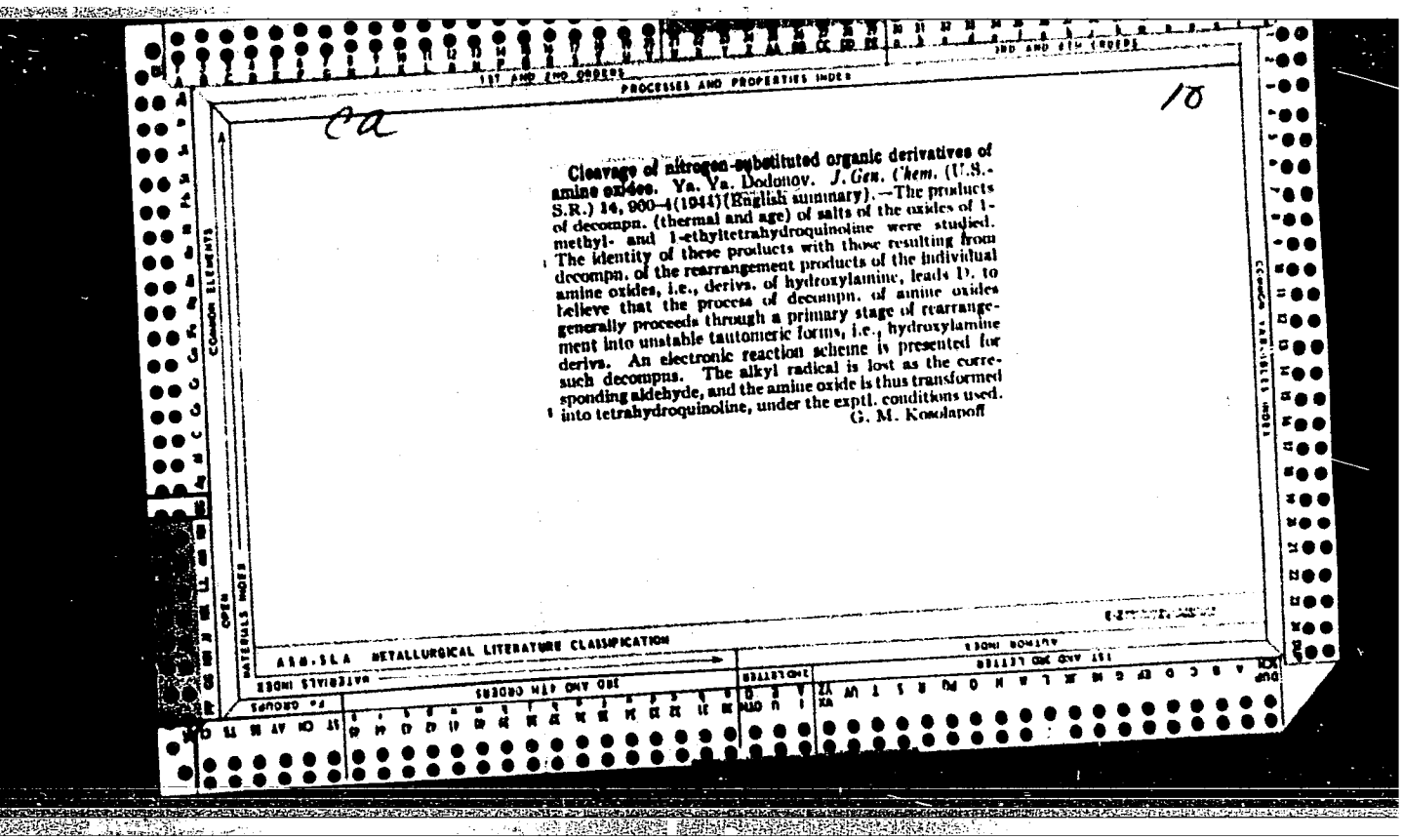


C+

14

$FeSO_4$ as a coagulating agent in the purification of water. Ya. Ya. Dudonov and T. G. Plekhanova. *Vodosnabzhenie Sanit. Tekh.* 1940, No. 12, 40-3; *Referat. Zhur.* 4, No. 7-8, 98(1941). The simultaneous use of $FeSO_4$ and Cl as a coagulating agent in the purification of water is based on the oxidation of ferrous to the ferric Fe and on the ppts. of $Fe(OH)_3$ by reaction of ferric salts with $Ca(HCO_3)_2$. A 10% $FeSO_4$ soln. is suitable. The optimum dose for purifying [illegible] of water is 1 l of the soln. added at the rate of 12 l./min. W. R. Horn





PROCESSES AND PROPERTIES INDEX

10

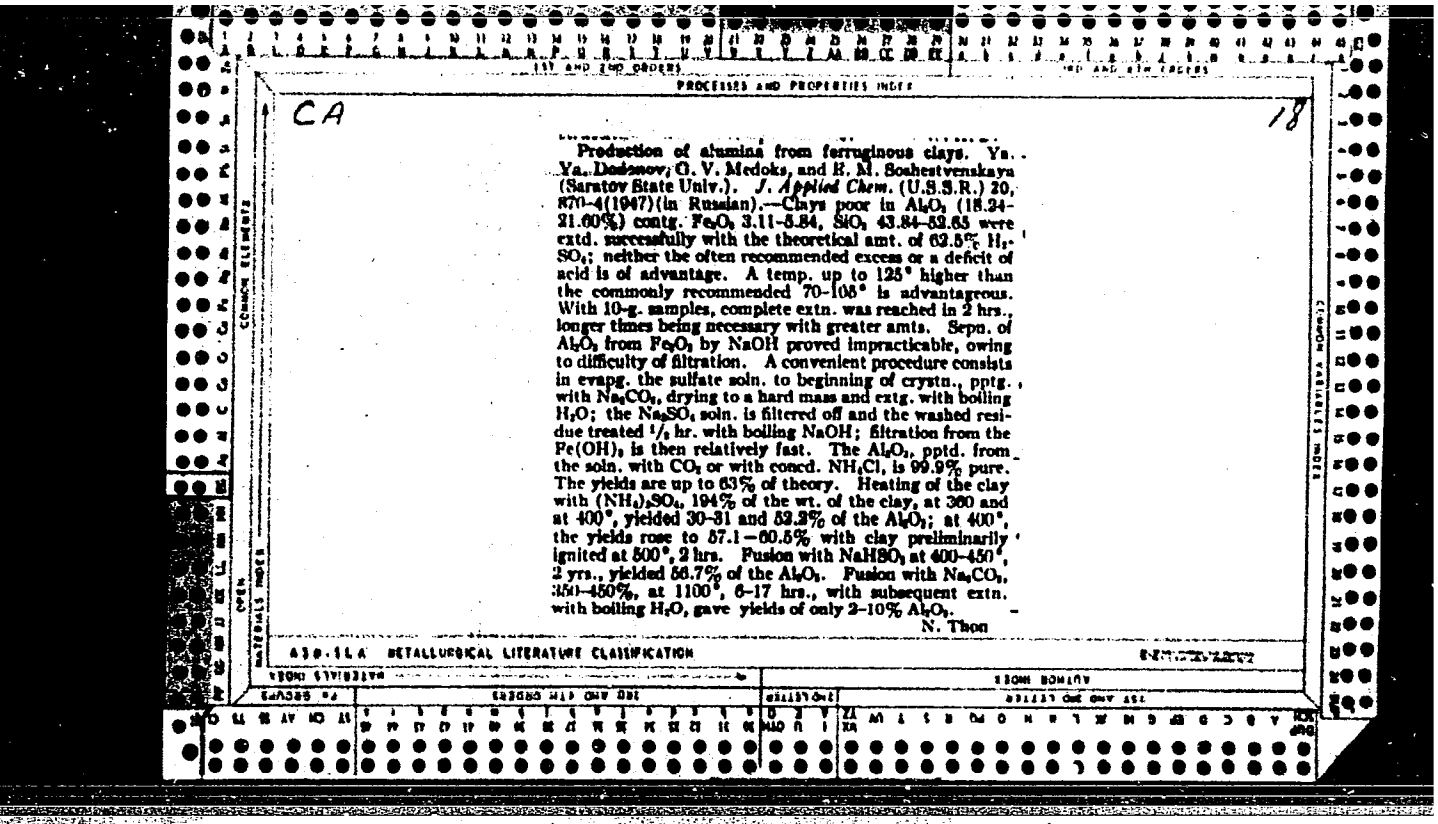
Cleavage of nitrogen-substituted organic derivatives of amine oxides. Ya. Ya. Dodonov. *J. Gen. Chem.* (U.S.S.R.) 14, 900–4(1944)(English summary).—The products of decompn. (thermal and age) of salts of the oxides of 1-methyl- and 1-ethyltetrahydroquinoline were studied. The identity of these products with those resulting from decompn. of the rearrangement products of the individual amine oxides, i.e., derivs. of hydroxylamine, leads D. to believe that the process of decompn. of amine oxides generally proceeds through a primary stage of rearrangement into unstable tautomeric forms, i.e., hydroxylamine deriva. An electronic reaction scheme is presented for such decompns. The alkyl radical is lost as the corresponding aldehyde, and the amine oxide is thus transformed into tetrahydroquinoline, under the exptl. conditions used.
G. M. Kosolapoff

METALLURGICAL LITERATURE CLASSIFICATION

DODONOV, Ya. Ya.

SYNTHESIS OF SILICON TETRACHLORIDE. Ya. Ya. Dodonov and M. N. Churmanteeva. (Saratov State Univ.). J. Gen. Chem. (U.S.S.R.) 16, 1949-50 (1946)(in Russian). -- Gatterman's method (Ber. 22, 186 (1889)) of heating Si + MgO, obtained by reduction of SiO_2 with Mg, in a stream of pure dry Cl_2, gave yields not over 20-30%, with the reaction starting mostly not under 400-500°. However the synthesis is promoted by the presence, in the Cl_2, of traces of HCl which reacts at temp. lower than that of the main reaction $Si + 2Cl_2 \rightarrow SiCl_4$; the reduced mixt. always contains also some $SiMg_2$; hence, the sequence of secondary reactions: $SiMg_2 + 4HCl \rightarrow SiH_4 + 2MgCl_2$; $SiH_4 + 4Cl_2 \rightarrow SiCl_4 + 4HCl$; $Si + 7HCl \rightarrow SiCl_4 + SiHCl_3 + 3H_2$; $3Cl_2 + 3H_2 \rightarrow 6\ HCl$; $SiHCl_3 + SiCl_4 \rightarrow Si_2Cl_6 + HCl$; $SiHCl_3 + Cl_2 \rightarrow SiCl_4 + HCl$; in which HCl is regenerated and thus acts autocatalytically. When the Cl_2 was bubbled through concd. H_2SO_4 with a little NaCl, formation of $SiCl_4$ started at about 300° and the yields were higher. HCl is also reformed by hydrolysis of $SiCl_4$ with the H_2O formed from MgO + HCl.

Immediate source clipping N. Thon



PROCESSES AND PROPERTIES INDEX

CA

18

Production of alumina from ferruginous clays. Ya. Ya. Dadanov, O. V. Medoks, and E. M. Soshestvenskaya (Saratov State Univ.). *J. Applied Chem.* (U.S.S.R.) 20, 870–4(1947)(in Russian).—Clays poor in Al_2O_3 (18.24–21.60%) contg. Fe_2O_3 3.11–5.84, SiO_2 43.84–52.65 were extd. successfully with the theoretical amt. of 62.5% H_2SO_4; neither the often recommended excess or a deficit of acid is of advantage. A temp. up to 125° higher than the commonly recommended 70–105° is advantageous. With 10-g. samples, complete extn. was reached in 2 hrs., longer times being necessary with greater amts. Sepn. of Al_2O_3 from Fe_2O_3 by NaOH proved impracticable, owing to difficulty of filtration. A convenient procedure consists in evapg. the sulfate soln. to beginning of crystn., pptg. with Na_2CO_3, drying to a hard mass and extg. with boiling H_2O; the Na_2SO_4 soln. is filtered off and the washed residue treated ½ hr. with boiling NaOH; filtration from the $Fe(OH)_3$ is then relatively fast. The Al_2O_3, pptd. from the soln. with CO_2 or with concd. NH_4Cl, is 99.9% pure. The yields are up to 63% of theory. Heating of the clay with $(NH_4)_2SO_4$, 194% of the wt. of the clay, at 360 and at 400°, yielded 30–31 and 52.2% of the Al_2O_3; at 400°, the yields rose to 57.1–60.5% with clay preliminarily ignited at 500°, 2 hrs. Fusion with $NaHSO_4$ at 400–450°, 2 yrs., yielded 56.7% of the Al_2O_3. Fusion with Na_2CO_3, 350–450%, at 1100°, 6–17 hrs., with subsequent extn. with boiling H_2O, gave yields of only 2–10% Al_2O_3.

N. Thon

A30-11A METALLURGICAL LITERATURE CLASSIFICATION

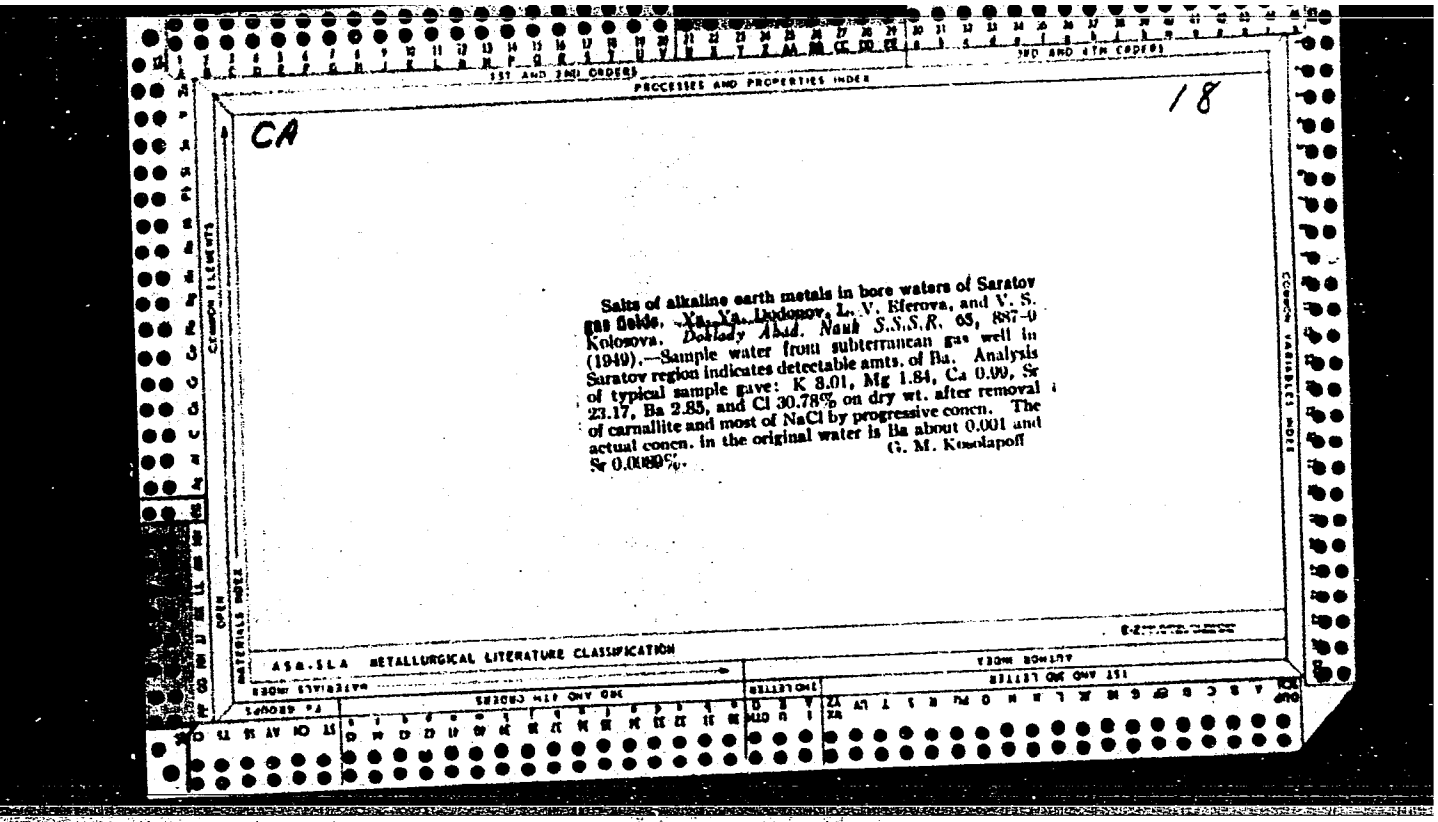
DODONOV, YA. YA. PA 55/49T12

USSR/Chemistry - Calcium Chloride Nov 48
Chemistry - Salts

"An Experiment in Fractional Separation of Salts from Calcium Chloride Brines of Several Subsurface Waters in the Saratovskiy Gaseous Deposit," Ya. Ya. Dodonov, L. V. Yeferova, V. S. Kolosova, 4 pp
Dok. AN, SSSR, 63, pp.301-4

The scheme sodium chloride → sylvanite → carnallite → a salt composite mixture $CaCl_2.2CaCl_2.12H_2O$ and $SrCl_2.2H_2O$ → tachhydrite → $MgCl_2.2CaCl_2.6H_2O$ → calcium chloride summarizes the whole crystallization process of brines of drill waters from the well studied (No 12).
Submitted by Acad D. S. Belyankin 23 Sep 48.

55/49T12



CA

18

Salts of alkaline earth metals in bore waters of Saratov gas fields. Ya. Ya. Lipidopov, L. V. Eferova, and V. S. Kolosova. *Doklady Akad. Nauk S.S.S.R.* 68, 887–9 (1949).—Sample water from subterranean gas well in Saratov region indicates detectable amts. of Ba. Analysis of typical sample gave: K 8.01, Mg 1.84, Ca 0.09, Sr 23.17, Ba 2.85, and Cl 30.78% on dry wt. after removal of carnallite and most of NaCl by progressive concn. The actual concn. in the original water is Ba about 0.001 and Sr 0.089%. G. M. Kosolapoff

CA

6

The α-bromo-*d*-camphor-π-sulfonates of the rare earths. Ya. Yu. Dodonov and K. F. Protyanova. *Doklady Akad. Nauk S.S.S.R.* 68, 301-4(1949).—NH$_4$ bromocamphorsulfonate was converted to the Ag salt by exchange with $AgNO_3$; the Ag salt treated with the corresponding metal chlorides in aq. medium, filtered, and evapd., gave on cooling the following rare earth salts, which were dried over H_2SO_4 to const. wt.; the hydration was detd. by vacuum drying. All are sol. in H_2O, decomp. on heating, and are insol. in org. solvents. *La*$(C_{10}H_{14}O_4BrS)_3.8H_2O$, $[\alpha]_D$ 76.36°; *Ce*$(C_{10}H_{14}O_4BrS)_3.8H_2O$, $[\alpha]_D$ 76.22°; *Nd*$(C_{10}H_{14}O_4BrS).9H_2O$, $[\alpha]_D$ 75.07°. The rotation increases with decrease of at. wt. of the metal, and the at. wts. can be calcd. from the optical data with good agreement except for Nd, which gave too low a value, probably because of some contamination with Ce and La.

G. M. Kosolapoff

(N.G. Chernyshevskiy, Saratov State University)

C A

Synthesis of racemic oxides of 1-propyl- and 1-isopropyl-tetrahydroquinolines. Va. Va. Ivanov, N. K. Pado, K. K. Petelina, and N. M. Petrova (N. G. Chernyshev State Univ., Saratov). *Zhur. Obshchei Khim.* (J. Gen. Chem.) **20**, 1058-61(1950).—1-Propyltetrahydroquinoline (6 g.) in C_6H_6 treated with ice-cooling with $BzOH$ (0.38 g. active O) in C_6H_6 and in 10-15 min. with picric acid gave *1-propyltetrahydroquinoline oxide picrate*, m. 117-18° (from Me_2CO); shaking with concd. HCl in PhNO gave the *HCl salt*, decomp. 137-8°, which with Ag bromocamphorsulfonate in H_2O gave the corresponding *d-α-bromocamphorsulfonate*, m. 138-44° (from EtOH), forming 2 kinds of crystals (plates and needles). *1-Isopropyltetrahydroquinoline* similarly gave the *picrate*, m. 132.5° (decomp.; from Me_2CO), and *HCl salt*, decomp. 144-4.5° (from EtOH-Me_2CO), of its oxide. G. M. K

USSR/Chemistry - Br and I From Gas Wells Jan/Feb 51

"Problem of the Determination of Bromides and Iodides in Mineral Waters," Ya. Ya. Dodonov, V. P. Khramov, Chair Inorg Chem, Saratov State U imeni N. G. Chernyshevskiy

"Zhur Analit Khim" Vol VI, No 1, pp 61-64

Tested Weszelszky method for detn of small amt of Br and I when both are present. Clarified harmful effect of contamination, by traces of Fe, of alkalis used in analysis. Conducted detn of Br and I in 3 samples of salt soln obtained in drilling at Saratov Gas Deposit.

177T12

DODONOV, YA. YA.

USSR/Chemical Technology - Chemical Products and Their Application. Treatment of Solid Mineral Fuels, I-12

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 62543

Author: Dodonov, Ya. Ya., Lebedev, M. N., Maslennikova, N. P.

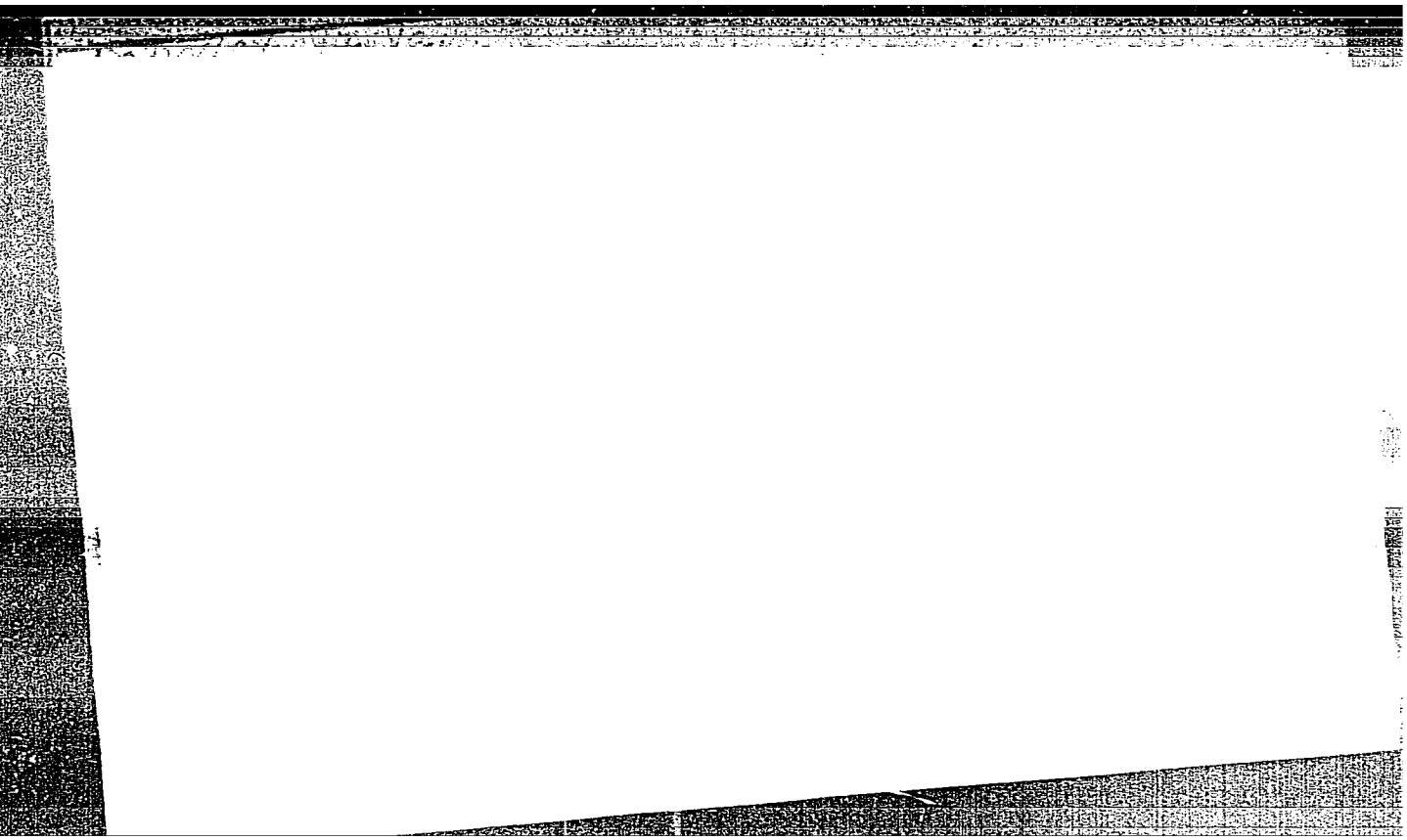
Institution: None

Title: Investigation of Gasification Tar of Savel'yevsk Shale

Original Periodical: Nauch. yezhegodnik za 1954 g., Saratovsk. un-t, Saratov, 1955, 483-484

Abstract: Acid portion recovered from tar produced by gasification of Savel'yevsk shale in an industrial gas generator with steam oxygen blowing, by treatment with petroleum ether was divided into phenols and asphaltenes. Narrow phenol fractions were identified by condensation of Na-phenolates with monochloracetic acid and from the composition of phenoxyacetic acid and its melting point the corresponding phenols were determined. In the phenolic portion of the 165-190° fraction was ascertained the presence of p- and m-cresol and 2,3-methoxyphenols and in the 190-270° fraction were found 2,3,4-methoxyphenols.

Card 1/1



APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000410720001-6"

DODONOV Ya. Ya.

USSR /Chemical Technology. Chemical Products and Their Application I-15

Treatment of solid mineral fuels

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31844

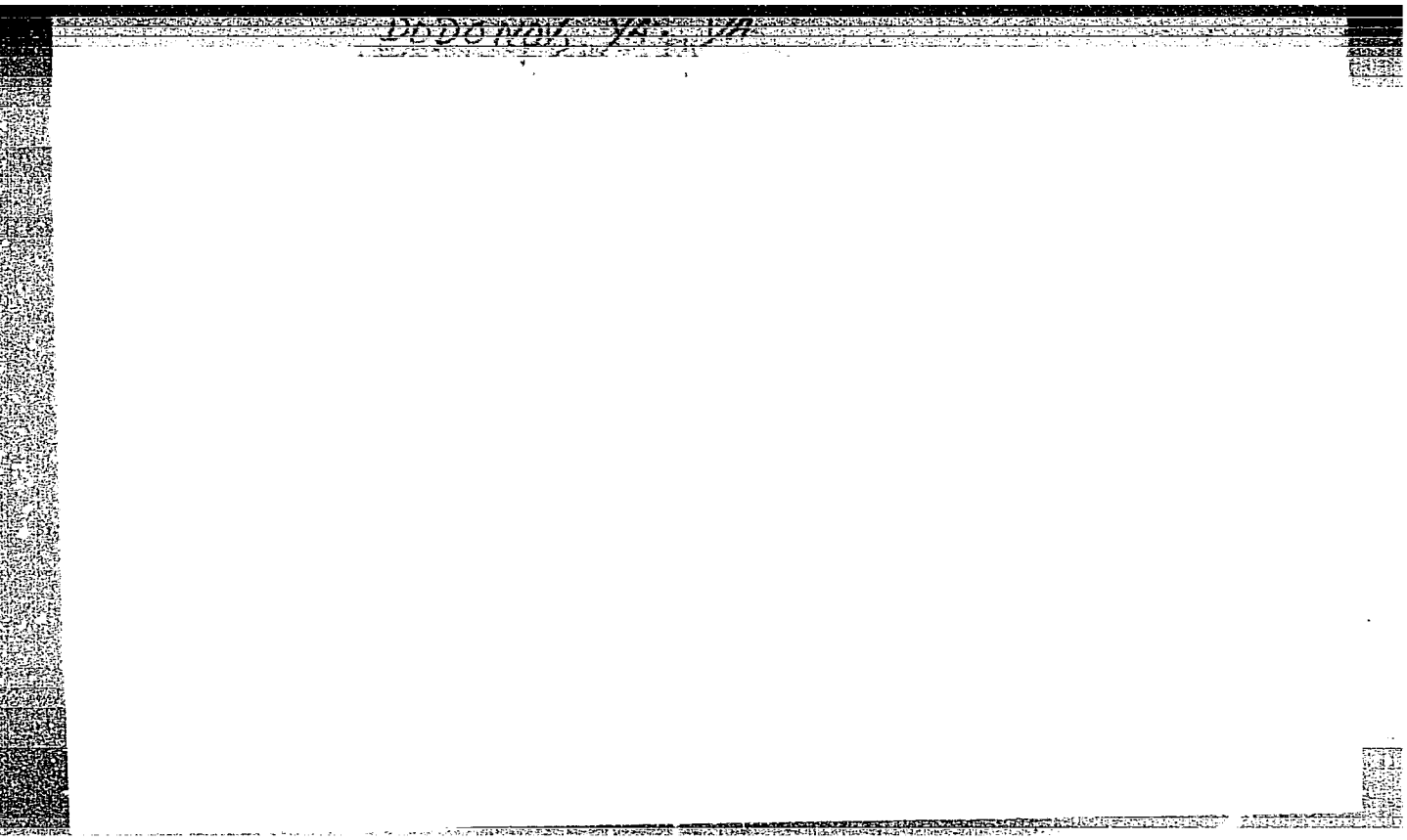
Author : Dodonov Ya. Ya., Lebedev M.N., Maslennikova N.P.

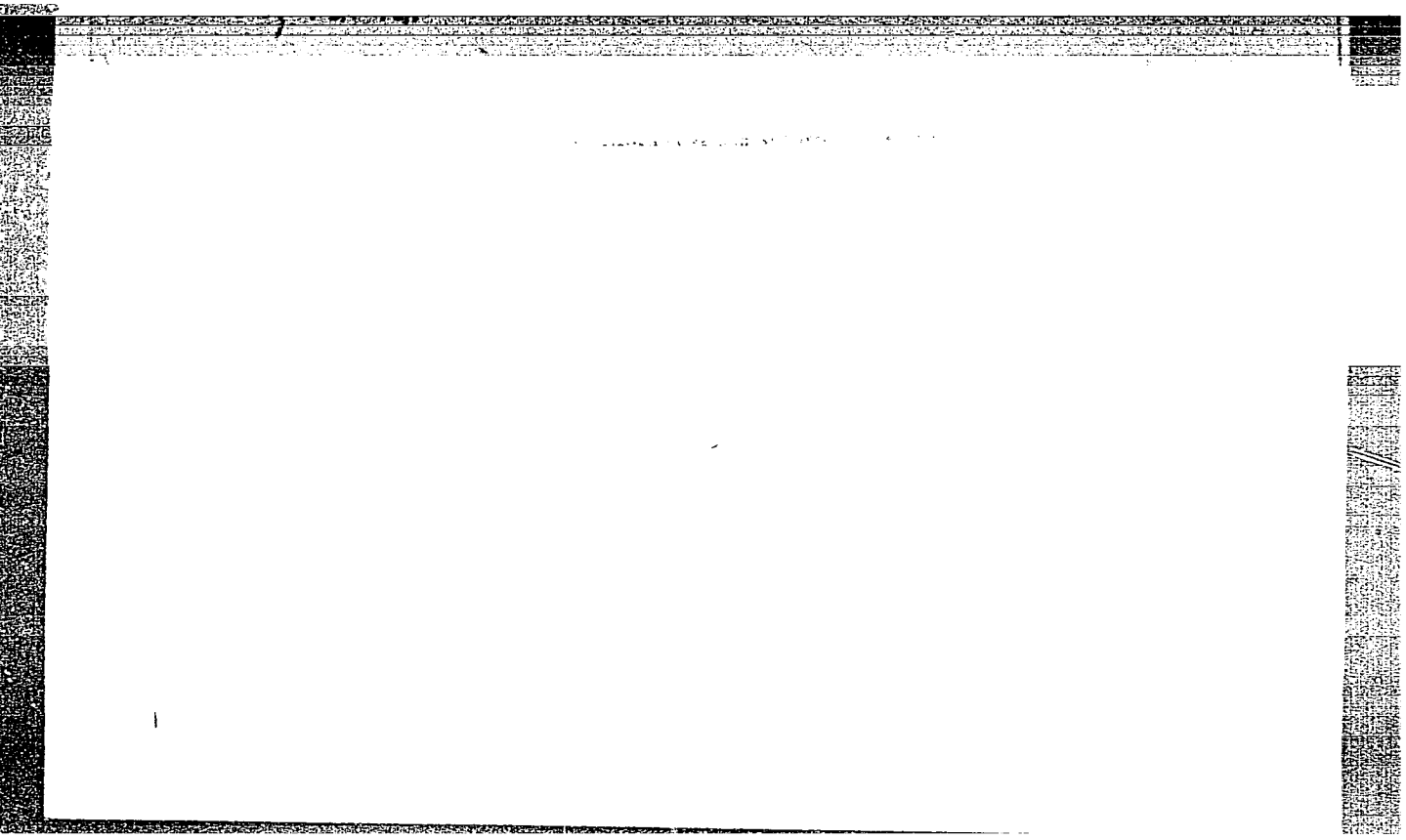
Title : Investigation of the Tar of Gasification of Savel'yevskiy Shale

Orig Pub: Sb.: Goryuchiye slantsy. Khimiya i tekhnologiya, No 2. Tallin, Est. gos. izd-vo, 1956, 125-129

Abstract: See also RZhKhim, 1956, 62543

Card 1/1





APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000410720001-6"

Dodonov, Ya. Ya.

2146. CHARACTERISTICS OF COMMERICAL SHALE USED FOR GASIFICATION UNDER [illegible] STEAM-OXYGEN AND STEAM-AIR BLAST. Dodonov, Ya.Ya. et al. [illegible] Univ. [illegible] Sci. [illegible] 1956 [illegible]

[illegible] Khim. [illegible]

of [illegible] shales used in experiments are recorded.

DODONOV, Ya. Ya.

5(2)

PHASE I BOOK EXPLOITATION SOV/1727

Akademiya nauk SSSR. Institut geokhimii i analiticheskoy khimii

Redkozemel'nyye elementy; polucheniye, analiz, primeneniye (Rare Earth Elements; Extraction, Analysis and Application) Moscow, Izd-vo AN SSSR, 1958. 331 p. 2,200 copies printed.

Resp. Ed.: D. I. Ryabchikov, Professor; Editorial Board: I. P. Alimarin, Corresponding Member, USSR Academy of Sciences, I. N. Zaozerskiy, Doctor of Chemical Sciences, K. V. Koglyarov, Candidate of Technical Sciences, V. I. Kuznetsov, Doctor of Chemical Sciences, M. M. Senyavin, Candidate of Chemical Sciences, and Ya. S. Sklyarenko, Candidate of Chemical Sciences; Eds. of Publishing House: D. N. Trifonov and T. G. Levi; Tech. Ed.: S. G. Markovich.

PURPOSE: This book is intended for scientists, chemists, teachers and students of higher educational institutions, chemical and industrial engineers, and other persons concerned with the extraction, preparation, use, or study of rare earth elements.

COVERAGE: This collection contains reports presented at the June 1956 Conference on Rare Earth Elements at the Institute of Geochemistry and Analytical Chemistry imeni V. I. Vernadskiy of the Academy of Sciences USSR. The articles treat chemical methods of separating rare earth mixtures, methods of processing rare earth ores, ion exchange chromatography, chemical analysis, and some industrial applications of rare earths. Aside from contributing authors, the editors mention the following Soviet scientists, who are studying rare earth elements, rare earth deposits, extraction methods, and the preparation of oxides and salts: Martynov, Mel'nikov, Khrushchev, Melikov, Pisarzhevskiy, Chernyak, Tamatar, Belousov, Zhukov and especially, N. A. Orlov, who first obtained the majority of rare earth elements in the pure state, separated many complex molecular compounds of these elements, and determined their specific properties. References are given at the end of each article.

TABLE OF CONTENTS:

Card 5/11

DODONOV, YA. YA.

5(2) PHASE I BOOK EXPLOITATION SOV/2402

Akademiya nauk SSSR. Institut geokhimii i analiticheskoy khimii

Redkozemel'nyye elementy; polucheniye, analiz, primeneniye (Rare Earth Elements; Production, Analysis, and Use) Moscow, Izd-vo AN SSSR, 1959. 331 p. 5,000 copies printed.

Resp. Ed.: D. I. Ryabchikov, Professor; Eds. of Publishing House: D. N. Trifonov and T.G. Levi; Tech. Ed.: S. G. Markovich; Editorial Board: I. P. Alimarin, Corresponding Member, USSR Academy of Sciences, I. V. Tananayev, Doctor of Chemical Sciences, R. V. Kotlyarov, Candidate of Chemical Sciences, V. I. Kuznetsov, Doctor of Chemical Sciences, M. M. Senyavin, Candidate of Chemical Sciences, and Yu. S. Sklyarenko, Candidate of Chemical Sciences.

PURPOSE: This book is intended for chemists in general and for geochemists and analytical chemists in particular.

COVERAGE: This collection of articles consists of reports presented at the Rare Earth Elements Symposium held in June 1956 at the Institute of Geochemistry and Analytical Chemistry imeni V. I. Vernadskiy. The book may be divided into three sections: the characteristics, uses and production of rare earth elements (REE); the methods of analyzing REE; and the application of individual rare earth elements and REE mixtures in the glass and metallurgical industries, and their use as catalysts. Considerable space is devoted to the application of ion-exchange chromatography in the production of pure forms of all rare earth elements. The combinations of this method with other methods in separating REE on an industrial scale are discussed by D. I. Ryabchikov, Yu. S. Sklyarenko, and M. M. Senyavin. Chemical methods of separating REE compounds are discussed by I. V. Tananayev (who is said to be the first in the USSR to develop methods of processing REE), ... V. P. Kotlyarov, L. F. Andreyeva, A. V. Nikolayev, and G. P. Aleksandrov. Quantitative X-ray spectral analytical methods are described by E. Ye. Vaynshteyn, and chemical methods of analysis by I. P. Alimarin and F. I. Pavlotskaya. The determination of REE impurities in pure products and atomic materials are discussed at length in these articles by A. N. Zaydel' and his associates. All articles are accompanied by photographs, diagrams, tables, and bibliographic references.

(3/5)

DODONOV, Ya.Ya.; KLINUSHINA, T.F.

Investigating the conditions of the formation and stability of pyrophoric iron sulfides. Part 1. Izv.vys.ucheb.zav.; khim.i khim.tekh. 2 no.5:730-733 '59. (MIRA 13:8)

1. Saratovskiy gosudarstvennyy universitet im. N.G.Chernyshevskogo, kafedra neorganicheskoy khimii.
(Iron sulfide)

DODONOV, Ya.Ya.; PIRKES, S.B.

Salts of some rare-earth elements with α-nitro-d-camphor. Uch. zap. SGU 75:3-6 '62. (MIRA 17:3)

DODONOV, Ya.Ya.; KLINUSHINA, T.F.

Preparation of pyrophoric iron sulfides. Uch.zap. SGU 75:14-17 '62.

Effect of temperature on the dehydration of iron oxides. Ibid.:17-19 (MIRA 17:3)